



ADVANCED CRUSHING TECHNOLOGY

428 TRAKPACTOR



PLANT USER MANUAL

OPERATION INSTALLATION PARTS

MAINTENANCE AND SERVICE



Safety.



This manual contains safety information which the operator should read and follow. Failure to do this will increase the risk of injury or may result in death.



TEREX | PEGSON

IMPORTANT

**TEREX PEGSON PLANTS CAN INCLUDE
OPTIONAL EQUIPMENT AND/OR SPECIAL
FEATURES ADDITIONAL TO THE
STANDARD SPECIFICATION.**

**THESE MAY AFFECT THE INFORMATION
GIVEN IN THIS OPERATORS MANUAL.**

**LOOK IN SECTION 11 - APPENDIX OF THIS
MANUAL FOR ANY ADDENDUM WHICH
MAY RELATE TO ADDITIONAL EQUIPMENT
OR VARIATIONS TO THE STANDARD
SPECIFICATION.**

**TAKE NOTE OF ANY VARIATIONS TO THE
STANDARD PROCEDURES AND/OR
COMPONENT SPECIFICATIONS.**

Options EN



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IMPORTANT SAFETY NOTICE!

The environment in which the plant will operate can contain risks to health and safety which the operator must take steps to identify and guard against. Dangers from overhead conveyor discharges, overspill material, vehicle movements, etc., as well as other site related hazards must be anticipated. Avoid these dangers by carrying out risk assessments before the plant is put into operation to ensure appropriate measures are implemented and site personnel safety awareness training has been undertaken.

Read this manual carefully to learn how to operate and service your plant correctly. Failure to do so could result in personal injury or equipment damage.

Consider this manual a permanent part of your plant. Keep it with the plant at all times.

Follow all applicable safety regulations and recommendations in this manual as appropriate to your plant and the situation/conditions prevailing at the time.

Federal, State, National and Local laws and safety regulations must be complied with at all times to prevent possible danger to person(s) or property from accidents or harmful exposure.

See also the separate Operation and Maintenance Manual provided for the diesel engine fitted to your plant and in particular read and observe the instructions within the Safety Section of the engine manual.

INFORMATION AND ADVICE

If you need any information or advice regarding your 428 Trakpactor contact:-

BL-Pegson Limited
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Coalville
Leicestershire LE67 3GN
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Telephone : +44 1530 518600, Fax : +44 1530 518618, E-mail : sales@bl-pegson.com

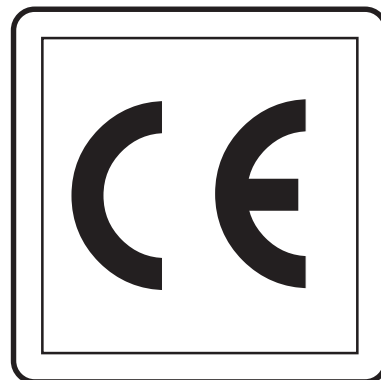
or

Terex Crushing & Screening Inc
11001 Electron Drive
Louisville
Kentucky 40299
U.S.A.

Telephone : +1 502 267 2314, Fax : +1 502 267 2317

EC Conformity

This plant is in conformity with the provisions of the EC Machinery Directive 98/37/EC together with appropriate EN Harmonised Standards and National BS Standards and Specifications.



Noise Level

HEARING HAZARD EXCEEDS 90 dB (A)

May cause loss or degradation of hearing over a period of time.

Wear proper hearing personal protective equipment.



Dust Generation

INHALATION HAZARD

Death, serious injury or delayed lung disease may result from breathing dusts that are generated when certain hazardous materials are crushed, screened or conveyed with this equipment.

When dusts are generated by the operation of this equipment, use approved respiratory protection, as required by Federal, State and Local safety and health regulations.





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Units of Measure

Within this User Manual figures shown within brackets () after the Metric unit of measure are approximate conversions from the actual metric measurement of the item concerned.

CALIFORNIA

Proposition 65 Warning

WARNING: Battery Posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm.

WASH HANDS AFTER HANDLING.

CALIFORNIA

Proposition 65 Warning

WARNING: Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm.

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1.1 Warnings and Symbols

The following signs and designations are used in the manual to designate instructions of particular importance.



This is the safety alert symbol. When you see this symbol on your plant or in this manual, be alert to the potential for personal injury or equipment damage.

Follow the recommended precautions and safe operating practices.



Indicates an imminently hazardous situation which, if not avoided, **will** result in death or serious injury.



Indicates a potentially hazardous situation which, if not avoided, **could** result in death or serious injury.



Indicates a potentially hazardous situation which, if not avoided, **may** result in minor or moderate injury. It may also be used to alert against unsafe working practices.



Indicates a statement of company policy as the message relates directly or indirectly to the safety of personnel and protection of property.

1.2 Organisation Measures

1.2.1

Ascertain from the appropriate Authority and observe all statutory and any other regulations that may apply to the planned location before operating the Trakpactor.

Loose or baggy clothing can get caught in running machinery.

Where possible when working close to engines or machinery, only do so when they are stopped. If this is not practical, remember to keep tools, test equipment and all other parts of your body well away from the moving parts.

For reasons of safety, long hair must be tied back or otherwise secured, garments must be close fitting and no jewellery such as rings may be worn. Injury may result from being caught up in the machinery or from rings catching on moving parts.

Always wear correctly fitting (EN/ANSI approved) personal protective equipment.

Personal Protective Equipment includes Hard Hat, Safety Glasses, Hearing Protection, Dust Mask, Close fitting Overalls, Steel Toed Boots, Industrial Gloves and a High Visibility Vest.

1.2.2

You can be injured if you do not obey the safety instructions as indicated on warning stickers.

Observe all safety instructions and warnings attached to the plant.

See to it that safety instructions and warnings attached to the plant are always complete and perfectly legible.

Keep warnings and instruction labels clean.

Replace unreadable or missing labels with new ones before operating the plant. Make sure replacement parts include warning or instruction labels where necessary.

1.2.3

Understand service procedure before doing work. Keep area clean and dry.

Never lubricate, clean, service or adjust machinery while it is moving. Keep hands, feet and clothing clear of power driven parts and in running nip-points. Disengage all power and operate controls to relieve pressure. Stop the engine. Implement lockout procedure. Allow the machinery to cool.

Keep all parts in good condition. Ensure that all parts are properly installed. Fix damage immediately. Replace worn and broken parts. Remove any build up of grease, oil and debris.

Disconnect battery ground cable before making adjustments on electrical systems or welding on plant.



For the execution of maintenance work, tools and workshop equipment adapted to the task on hand are absolutely indispensable.

1.2.4

Never make any modifications, additions or conversions which might affect safety without the supplier's approval.

In the event of safety relevant modifications or changes in the behaviour of the plant during operation, stop the plant and lock out immediately and report the malfunction to the competent authority/person.

1.3 Selection and Qualification of Personnel - Basic Responsibilities

1.3.1

Any work on and/or with the plant must be executed by trained, reliable and authorised personnel only. Statutory minimum age limits must be observed.

1.3.2

Work on electrical system and equipment of the plant must be carried out only by a skilled electrician or by instructed persons under the supervision and guidance of a skilled electrician and in accordance with electrical engineering rules and regulations.

1.3.3

Work on the hydraulic system must be carried out only by personnel with special knowledge and experience of hydraulic equipment.



1.4 Safety Instructions Governing Specific Operational Phases

1.4.1 Standard Operation

1.4.1.1

Take the necessary precautions to ensure that the plant is used only when in a safe and reliable state.

Operate the plant only for its designed purpose and only if all guarding, protective and safety orientated devices, emergency shut-off equipment, sound proofing elements and exhausts, are in all place and fully functional.

Before starting the engine ensure it is safe to do so.

1.4.1.2

In the event of material blockage, any malfunction or operational difficulty, stop the plant immediately and lockout. Have any defects rectified immediately.

1.4.1.3

In-running nip points on moving machinery can cause serious injury or even death.

Do not reach into unguarded machinery. Your arm could be pulled in and amputated.

Switch off and lockout the plant before removing any safety devices or guarding.

1.4.2 Special Work In Conjunction with Utilisation of the Plant and Maintenance and Repairs During Operation; Disposal of Parts and Consumables

1.4.2.1

Observe the adjusting, maintenance and intervals set out in these operating instructions, except where:

A : Warning, horn/light/gauge or indicator calls for immediate action.

B : Adverse conditions necessitate more frequent servicing.

Observe information on the replacement of parts and equipment. These activities may be executed by skilled personnel only.

1.4.2.2

When the plant is completely shutdown for maintenance and repair work, it must be secured against inadvertent starting by:

- Switching off the engine and remove the ignition switch/key.
- Implementing the lockout procedure.
- Attaching a warning sign(s) to the plant in appropriate positions.

1.4.2.3

Carry out maintenance and repair work only if the plant is positioned on stable and level ground and has been secured against inadvertent movement and buckling.

1.4.2.4

Never allow unqualified or untrained personnel to attempt to remove or replace any part of the plant, or anyone to remove large or heavy components without adequate lifting tackle.

To avoid the risk of accidents, individual parts and large assemblies being moved for replacement purposes should be carefully attached to lifting tackle and secured. Use only suitable and technically adequate lifting gear.

Never work or stand under suspended loads.

Keep away from the feed hopper and product conveyor discharge, where there is risk of serious injury or death due to the loading and removal of material.

1.4.2.5

Falling from and/or onto a BL-Pegson plant can cause injury or even death.

Do not climb on the plant whilst it is in operation. Never use plant parts as a climbing aid.

Beware of moving haulage and loading equipment in the vicinity of the plant.

For carrying out overhead assembly work always use specially designed or otherwise safety-oriented ladders and working platforms.

Always use any walkway/platforms provided or a safe and secure platform approved by the regional safety enforcing authority.

Always use a suitable lifting platform before attempting any work 2 metres (6' - 6'') or more above the ground level.

Keep all handles, steps, handrails, platforms, landing and ladders free from dirt, oil, snow and ice.

1.4.2.6

The fastening of loads and instructing of crane operators should be entrusted to experienced persons only. The marshaller giving the instructions must be within sight or sound of the operator.

1.4.2.7

After cleaning, examine all fuel, lubricant, and hydraulic fluid lines for leaks, loose connections, chafe marks and damage. Any defects found must be rectified without delay.

1.4.2.8

Any safety devices removed for set-up, maintenance or repair purposes must be refitted and checked immediately upon completion of the maintenance and repair work to ensure full working order.



1.4.2.9

Improperly disposing of waste can threaten the environment and ecology. Potentially harmful waste used with BL-Pegson equipment includes such items as oil, fuel, coolant, filters and batteries, etc.

Use leakproof containers when draining fluids. Do not use food or beverage containers that may mislead someone into drinking from them.

Do not pour waste onto the ground, down a drain or into any water source.

Ensure that all consumables and replaced parts are disposed of safely and with minimum environmental impact.

1.4.2.10

Always ensure that any safety fitment such as locking wedges, securing chains, bars or struts are utilised as indicated in these operating instructions.

Particularly make sure that any part of the plant raised for any reason is prevented from falling by securing in a safe reliable manner.

Never work under unsupported equipment.

Never work alone.

1.4.2.11

Diesel fuel is highly flammable.

Never remove the filler cap, or refuel, with the engine running.

Never add gasoline or any other fuels mixed to diesel because of increased fire or explosion risks.

Do not carry out maintenance on the fuel system near naked lights or sources of sparks, such as welding equipment or whilst smoking.

1.4.2.12

Using unapproved structures i.e. walkways/ platforms etc. in the vicinity of a BL-Pegson plant is very dangerous and could lead to serious injury or even death through falling and/or entanglement with the plant.

Do not use any unauthorised structures.



1.5 Warning of Special Dangers

1.5.1 Electric Energy

1.5.1.1

Use only original fuses with the specified current rating. Switch off the plant immediately if trouble occurs in the electrical system.

Plants with high voltage electrical equipment **must** be suitably earth bonded by a qualified electrician prior to activating the main isolator switch.

1.5.1.2

When working with the plant, maintain a safe distance from overhead electric lines. If work is to be carried out close to overhead lines, the working equipment must be kept well away from them. Check out the prescribed safety distances.

1.5.1.3

If your plant comes into contact with a live wire:

- Warn others against approaching and touching the plant.
- Have the live wire de-energized.

1.5.1.4

Work on the electrical system or equipment may only be carried out by a skilled and qualified electrician or by specially instructed personnel under the control and supervision of such an electrician and in accordance with applicable electrical engineering rules.

1.5.1.5

If provided for in the regulations, the power supply to parts of plants and plants, on which inspection, maintenance and repair work is to be carried out must be cut off. Before starting any work, check the de-energized parts for presence of power and ground or short circuit them in addition to insulating adjacent live parts and elements.

1.5.1.6

The electrical equipment of the plant is to be inspected and checked at regular intervals. Defects such as loose connections or scorched or otherwise damaged cables must be rectified immediately.



1.5.1.7

Necessary work on live parts and elements must be carried out only in the presence of a second person, who can cut off the power supply in the case of danger by actuating the emergency shut off or main power switch. Secure the working area with a red and white safety chain and a warning sign. Use insulated tools only.

1.5.1.8

Before starting work on high voltage assemblies and after cutting out the power supply, the feeder cable must be grounded and components such as capacitors short-circuited with a grounding rod.

1.5.1.9

These plants are wired on negative earth. Always observe correct polarity.

Always disconnect battery leads before carrying out any maintenance to the electrical system.

The battery contains sulphuric acid, an electrolyte which can cause severe burns and produce explosive gases.

Avoid contact with the skin, eyes or clothing.

1.5.2 Gas, Dust, Steam, Smoke and Noise

1.5.2.1

Always operate internal combustion engines and fuel operated heating systems only out of doors or in a well ventilated area. Before starting the plant in enclosed areas, make sure that there is sufficient ventilation.

Observe the regulations in force at the respective site.

Dust found on the plant or produced during work on the plant should be removed by extraction, not blowing.

Dust waste should be dampened, placed in a sealed container and marked, to ensure safe disposal.

1.5.2.2

Carry out welding, flame cutting and grinding work on the plant only if this has been expressly authorised, as there may be a risk of explosion and fire.

1.5.2.3

Before carrying out welding, flame cutting and grinding operations, clean the plant and its surroundings from dust and other inflammable substances and make sure the premises are adequately ventilated (as there may be a risk of explosion).



1.5.2.4

Always ensure that the operator(s) are provided with hearing protection of approved pattern and that these are worn at all times when the plant is operating.

Ensure operators wear a suitable face mask where exposed to possible harmful effects of air pollution of any kind.

1.5.3 Hydraulic and Pneumatic Equipment

1.5.3.1

Work on hydraulic equipment may be carried out only by persons having special knowledge and experience in hydraulic systems.

1.5.3.2

Check all lines, hoses and screwed connections regularly for leaks and obvious damage. Repair damage immediately. Splashed oil may cause injury and fire.

1.5.3.3

Depressurise all system sections and pressure pipes (hydraulic system, compressed air system) to be removed in accordance with the specific instructions for the unit concerned before carrying out any repair work.

1.5.3.4

Hydraulic and compressed air lines must be laid and fitted properly. Ensure that no connections are interchanged. The fittings, lengths and quality of the hoses must comply with the technical requirements.

1.5.3.5

Always practice extreme cleanliness servicing hydraulic components.

1.5.3.6

Hydraulic fluid under pressure can penetrate the skin causing serious injury.

If fluid is injected under the skin, it must be surgically removed or gangrene will result. Get **medical help immediately**.

Always relieve pressure from the hydraulic system before carrying out any kind of maintenance or adjustment.

Always use a piece of cardboard to check for leaks. Do not use your hand.

1.5.4. Hazardous Substances

Ensure that correct procedures are formulated to safely handle hazardous materials by correct identification, labelling, storage, use and disposal, all strictly in accordance with the manufacturers instructions and that all applicable regulations are observed at all times.



1.6 Transporting, Manoeuvring and Recommissioning

1.6.1

The plant must be towed, loaded and transported only in accordance with the operating instructions.

1.6.2

For towing the plant, observe the prescribed transport position, admissible speed and itinerary.

1.6.3

Use only appropriate means of transport and lifting gear where applicable of adequate capacity.

1.6.4

The recommissioning procedure must be strictly in accordance with the operating instructions.

1.6.5

Before starting work or travelling with the plant, check that the braking, and any signalling and lighting systems are fully functional.

1.6.6

Before setting the plant in motion always check that the accessories have been safely stowed away.

1.6.7

When travelling on public roads, ways and places, **always** observe the valid traffic regulations and, if necessary, ensure beforehand that the plant is in a condition compatible with these regulations.

1.6.8

In conditions of poor visibility and after dark, always switch on the lighting system of the transporting vehicle..

1.6.9

When crossing underpasses, bridges and tunnels or when passing under overhead lines always make sure that there is sufficient clearance.

1.6.10

Never travel across slopes; always keep the working equipment and the load close to the ground, especially when travelling downhill.

1.6.11

On sloping terrain, always adapt your travelling speed to the relevant ground conditions. Never change to a lower gear on a slope. **Always** change gear before reaching a slope.



1.6.12

Explosive separation of a tyre and rim parts can cause injury or death.

Do not attempt to mount a tyre unless you have the proper equipment to perform the job.

Always maintain the correct pressure. Do not inflate the tyre above the recommended pressure. Never weld or heat wheel and tyre assembly. The heat can cause an increase in air pressure resulting in a tyre explosion. Welding can structurally weaken or deform the wheel.

When inflating tyres, use a clip-on chuck and extension hose long enough to allow you to stand to one side and not in front or over the assembly. Use safety cage if available.

Check wheels for low pressure, cuts, bubbles, damaged rims or missing lug bolts and nuts.

1.7 Position of Emergency Stop Buttons & Isolation Switch

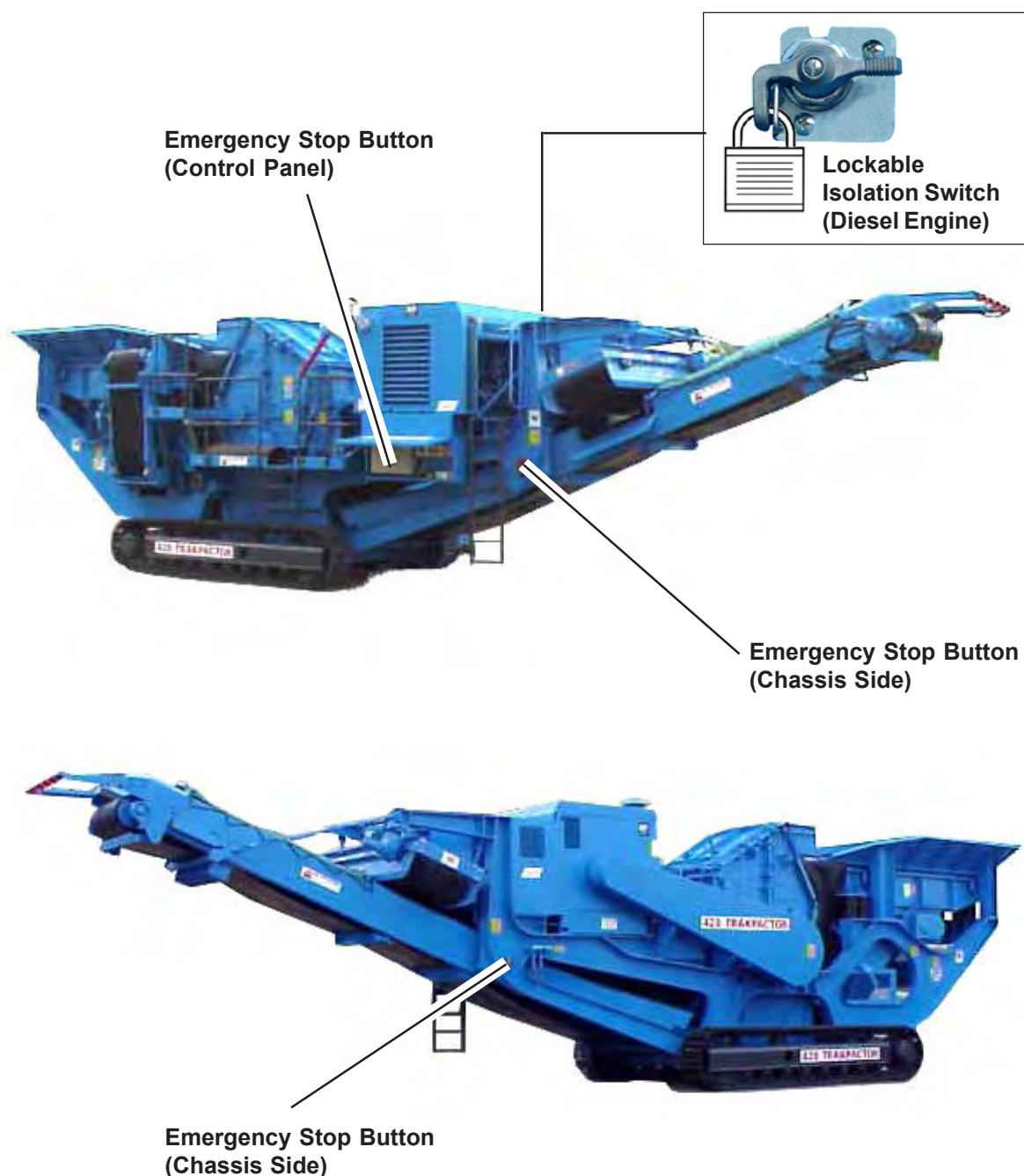
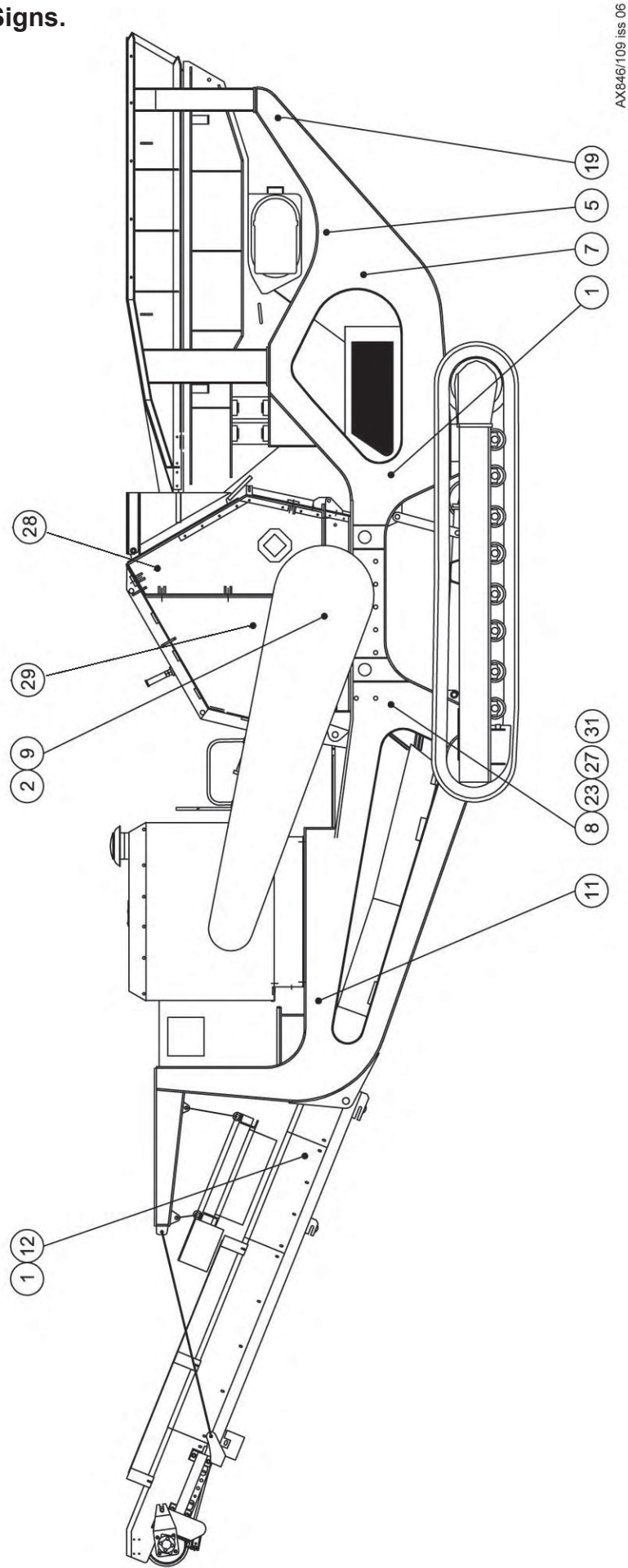


Figure 1a - Emergency Stop Buttons & Isolation Switch

1.8 Plant Warning Signs

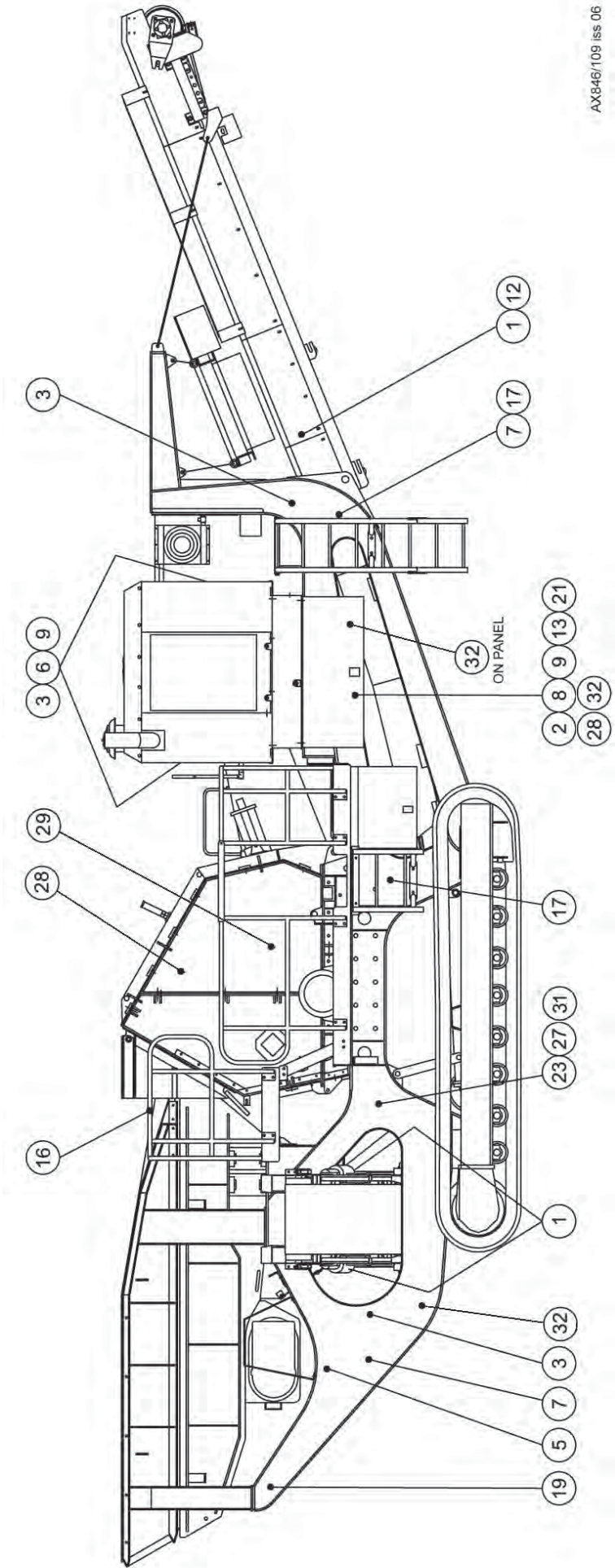
1.8.1 Location of Warning Signs.
Left Hand side of plant



AX846/109 iss 06

Figure 1b Warning Labels - Left Hand Side
AX846-901-8EN-02a 22/300

Location of Warning Signs, Right
Hand side of plant



AX846/109 iss 06

Figure 1c Warning Labels - Right Hand Side
AX846-901-8EN-02a 23/300

1.8.2 Location of Warning Signs - ENTANGLEMENT HAZARD

Safety Decal: 300/268 'Danger - Entanglement Hazard for Crusher & Panel'

Decal Location - 428 Trakpactor:



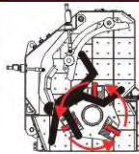
Control Panel, 428 Trakpactor



Impactor non-drive side, 428 Trakpactor



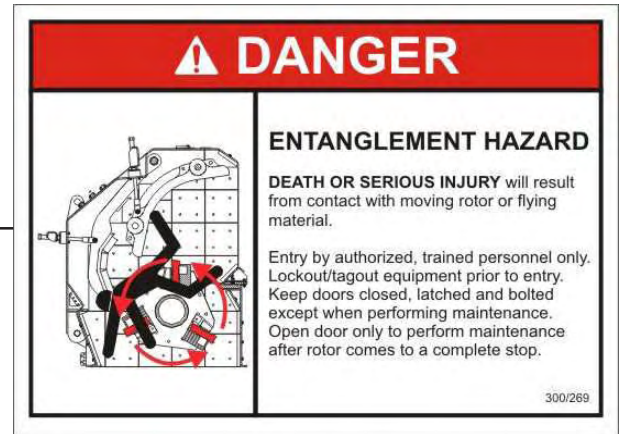
Impactor drive side, 428 Trakpactor

⚠ DANGER	
	ENTANGLEMENT HAZARD DEATH OR SERIOUS INJURY will result from contact with moving rotor or flying material. Entry by authorized, trained personnel only. Lockout/tagout equipment prior to entry. Keep doors closed, latched and bolted except when performing maintenance. Open door only to perform maintenance after rotor comes to a complete stop.
Safety Cutout Switch. Before opening the crusher, the following safety check must be undertaken: <ul style="list-style-type: none">• Run feeder and crusher empty of all material.• Close down the plant and implement the Lockout Procedure. Refer to User Manual.• Check safety cutout switch and wiring for any signs of physical damage.• Secure chains to protective caps of upper apron adjusters.• Release outer swivel eye bolts.• Turn Ignition Key to first position and then select pump mode.• Depress pump button and using manual lever, open crusher until there is approximately 25mm (1") between top of upper frame and main body.• Select plant mode on control panel.• Ensure everyone is clear of the machine and all emergency stops are released.• Attempt to start the engine. No cranking of the engine should occur. If the engine attempts to start, lockout the machine and contact your dealer to investigate the problem. Do not attempt to run until the fault has been corrected. <ul style="list-style-type: none">• Implement the Lockout Procedure and refer to the user manual before proceeding with maintenance.	

300/268

Safety Decal: 300/269 'Danger - Entanglement Hazard for Inspection Door'

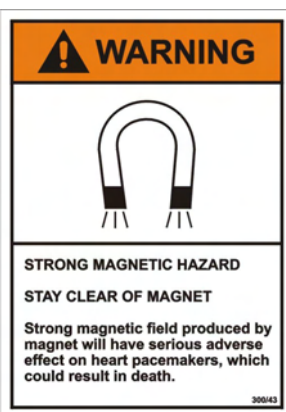
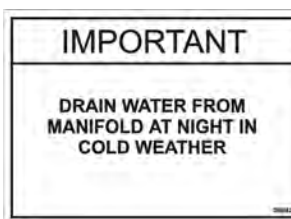
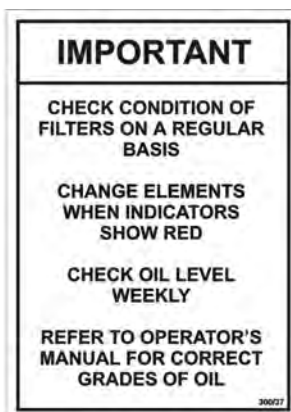
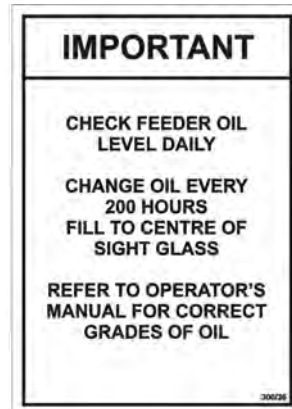
Decal Location - 428 Trakpactor:



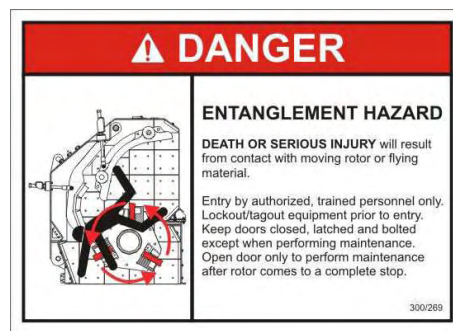
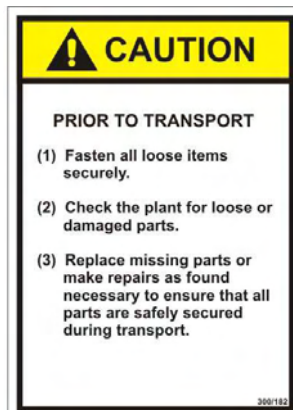
Inspection door both sides of impactor,
428 Trakpactor

1.8.3 Safety Sign Illustrations

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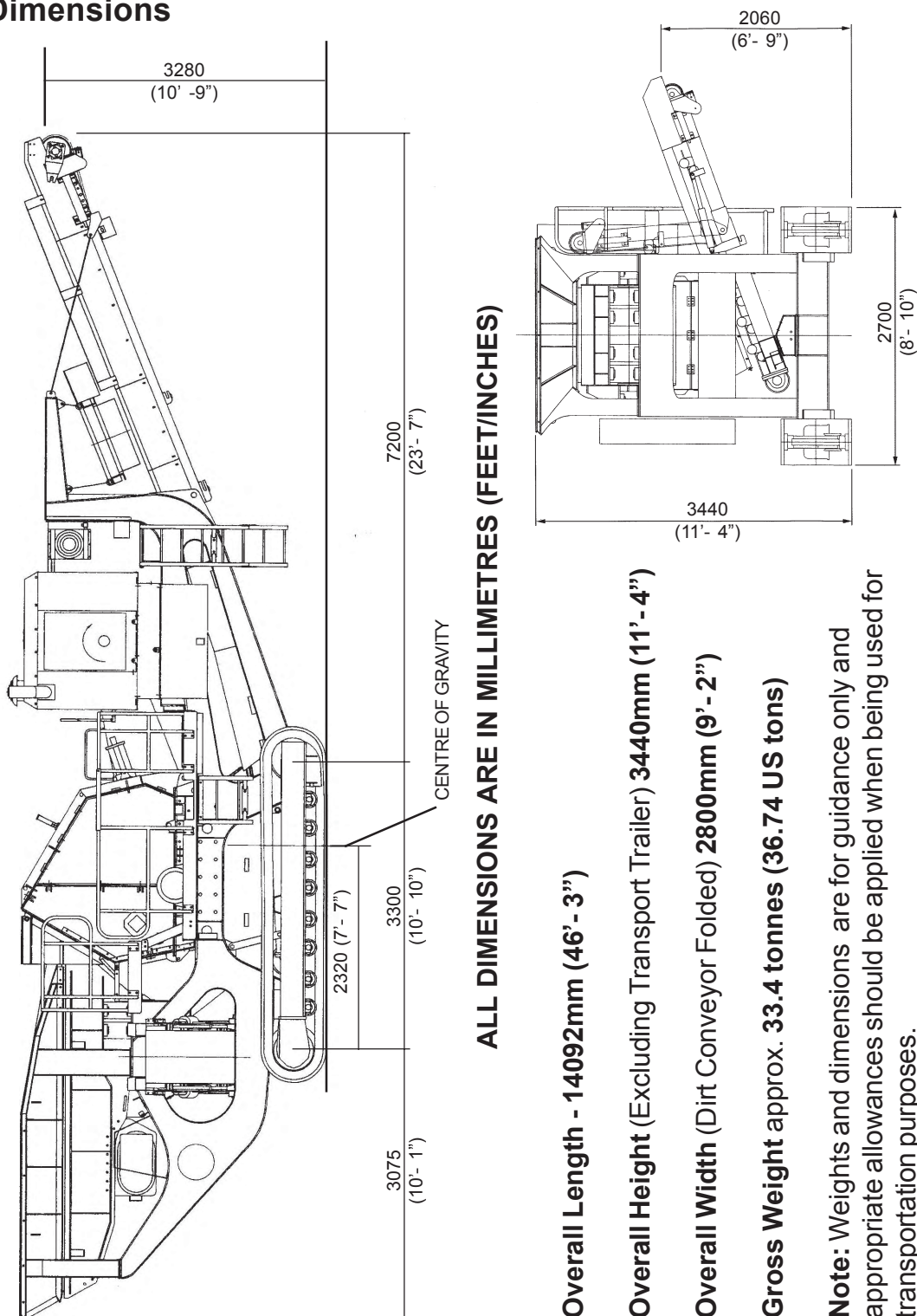
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2.1 Dimensions





2.2 Plant Description

Many of the terms used in this manual may not at first be obvious. Figure 2b identifies the main areas of the plant and the term with which they are referred to in this manual.

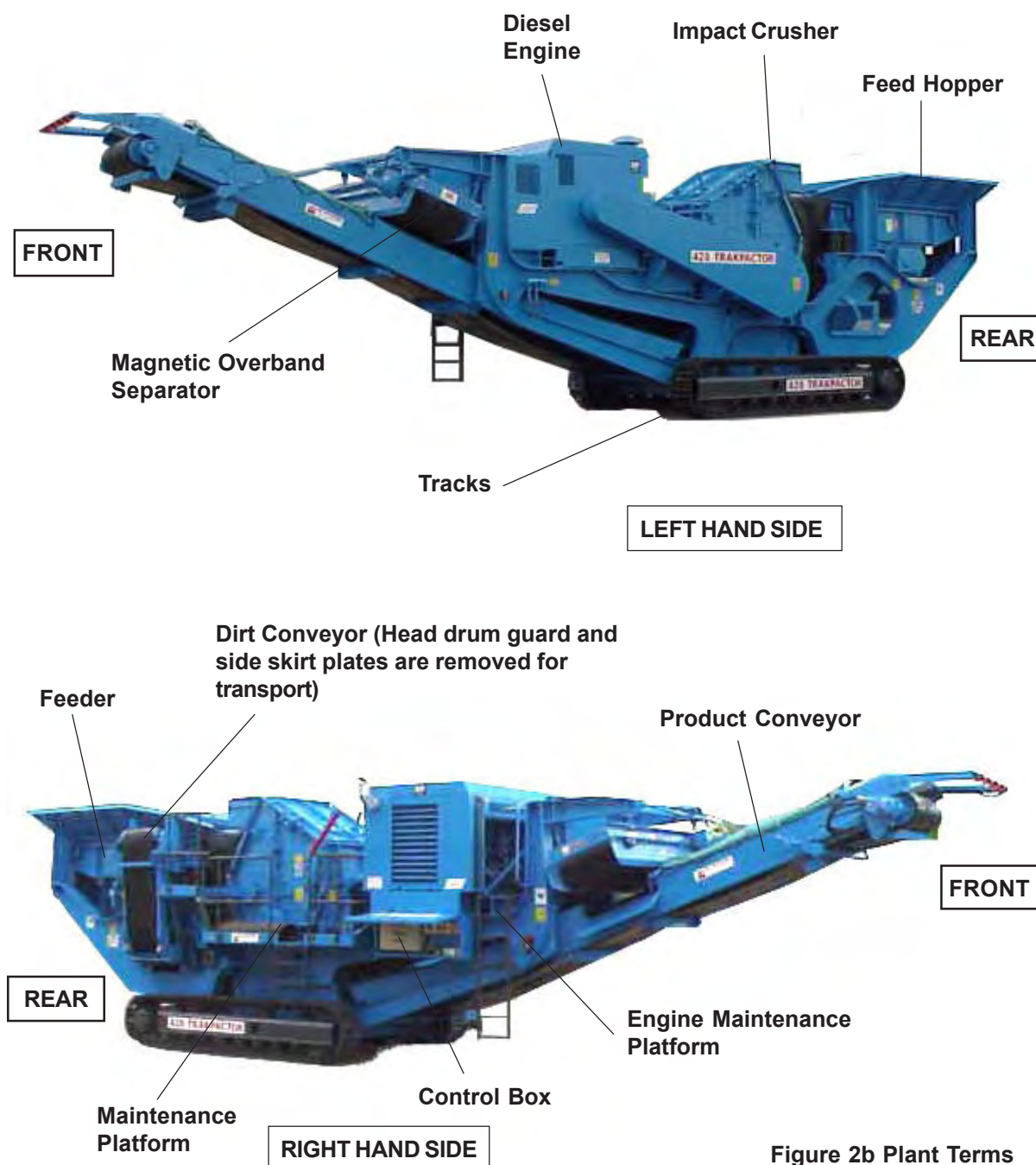


Figure 2b Plant Terms



2.3 Feeder

Type	Spring mounted vibrating pan
Width	1080mm (43")
Length	3800mm (12' - 6")
Unit	Twin shaft oil lubricated
Grizzly	Stepped fixed bars preset at nom. 50mm (2") spaces (at discharge end) Renewable tips at discharge end.
Underscreen	Blank mat fitted as standard (wire mesh an optional fitting)
Drive	Hydraulic motor
Control	Variable speed
Hopper	Heavy duty fixed type

2.4 Crusher

Type	Fixed blow bar impact crusher
Feed Opening	42"x 28" (1067mm x 711mm)
Liners	Fully lined internally with renewable abrasion resistant steel
Adjustment	Manual adjustment of impact faces - front and rear aprons - with overload compression springs on rear apron
Rotor	Four reversible/replaceable fixed blow bars running in two heavy duty self aligning spherical roller bearings
Lubrication	Greased roller bearings, inner and outer labyrinth seals
Drive	Vee belts from engine
Crusher Speed	Nom. 504 or 630 rpm - Two engine pulleys are provided - one fitted and the other supplied loose. Stock build plants are fitted with the higher speed pulley to suit general applications. Refer to 4.2.1 also
Control	Engine clutch
Blow Bars	Cast high manganese steel hammers are fitted as standard suitable for recycling applications with feed sizes up to 400mm and including some small quantity of steel reinforcing bar. They are secured with locking plates and can be turned when worn. For alternative applications and feed size, please consult BL-Pegson's Sales Department



Maintenance
Optional fitting

Hydraulic case opening
Lower swing beam/ grinding path, having overload
compression spring, available for certain quarry applications
subject to confirmation of suitability by BL - Pegsons Sales
Department

2.5 Product Conveyor

Type	Steel reinforced troughed belt
Width	1000mm (40")
Lubrication	Grease
Drive	Hydraulic motor
Control	Fixed speed
Skirts	Full length

2.6 Tracks

Type	160mm (6.3") pitch heavy duty
Width	400mm (16") - 500 mm wide optional
Centre	3300mm (10' - 10")
Drive	Hydraulic integral motors
Control	Remote handset-dual speed

2.7 Standard Powerpack

Type	Caterpillar C9 EU/EC Emission Regulations compliant 6 cyl. water cooled diesel
Rating	300hp @ 1800 rpm
Drives	Manual clutch to crusher through vee drive Vee belts to twin hydraulic pumps
Housing	Totally enclosed canopy with integral fuel tank and battery

2.8 Dustsprays

Type	Clean water multi atomising nozzles
Positions	Crusher discharge and product conveyor discharge
Inlet	Single point
Required supply	Up to approx. 7 litres/min (2 US galls) @ 2.8 bar (42psi)
Frost protection	System drain valves



2.9 Dirt Conveyor

Type	Plain troughed belt, hydraulically folded for transport by engine driven pump. Extended conveyor optional.
Width	600 mm (24")
Lubrication	Grease
Drive	Hydraulic motor
Control	Fixed speed
Skirts/Hood	Full length (removable for transport)

2.10 Magnetic Separator

Type	Suspended self cleaning crossbelt overband
Magnet	Permanent
Width	750 mm (30")
Centres	1680 mm (66")
Drive	Hydraulic motor
Control	Preset variable

2.11 Belt Weigher (optional)

Type	Single idler load sensor type including flow rate and totalizer displays on chassis mounted control box
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3.1 Introduction

This instruction manual contains important information on how to operate the Trakpactor safely, properly and most efficiently.

Observing these instructions and exercising Common Sense helps to avoid danger, to reduce repair costs and downtimes and to increase the reliability and life of the plant. Failure to do so may invalidate any warranties in force.

The operating instructions must always be available wherever the plant is in use.

These operating instructions must be read and applied by any person in charge of and/or working on the plant such as:-

Operation

Includes manoeuvring, setting up, operation during the course of work, evacuation of production material and waste, care and disposal of fuels and consumables, etc.

Maintenance

Servicing, inspection and repair
and/or

Transport

Follow all applicable laws and safety regulations for accident prevention and environmental protection.

3.2 General information

The Trakpactor which you have now received has been manufactured, assembled and tested with the utmost care and was built with first class materials.

Close attention has been paid to all details in assembly, running tests and final inspection.

We are confident that you have received a plant which will give you every satisfaction over a long period.

To be assured of faultless operation we would ask you to carefully read the following paragraphs and give the required time and attention to essential maintenance, cleaning and inspection.

The plant is simple to operate, adjustments are easy to make and expert assistance is seldom required, provided that ordinary care is exercised in daily use.

The plant has been built in accordance with state-of-the-art standards and recognised safety rules. It is designed to be reliable, efficient and safe when used and maintained in accordance with the instructions given in this manual.



3.3 Designated Use

IMPORTANT NOTICE

This plant is designed for both demolition and quarrying applications. When fitted with manganese steel blow bars the crusher will tolerate small quantities of steel reinforcing bar in the feed. However, the machine is not designed to accept large pieces of steel or other uncrushable objects and the feed material should be assessed / inspected for suitability prior to use. It is vitally important that large pieces of steel or similar uncrushable objects are not allowed to enter the crushing chamber as severe damage and injury may occur. When High Chromium steel bars are fitted, NO steel should be allowed to enter the crushing chamber and the machine should only be used on quarry applications or clean materials such as asphalt.

Operating the plant outside it's recommended range of applications and operating parameters, will result in a loss of guarantee and the manufacturer/supplier cannot be held liable for any damage resulting from such use. The risk of such misuse lies entirely with the user.

Material passing through the feeder grizzly bars can be disposed of onto the dirt conveyor or reclaimed totally or in part to bypass the crusher and join the crushed product.

The magnetic overband separator is intended to extract ferrous materials from the crushed product but this material in the feed must be limited to a size that will not cause damage to the crusher.

3.3.1 Operating Temperature Range

The normal operating temperature range of the plant is from -10°C to +40°C (+14°F to +104°F). For use in temperatures outside of this range, contact your local dealer or BL-Pegson for details.

Note: Appropriate oil & coolant to suit the local operating conditions must be used, as specified elsewhere in this manual.



WARNING

If you have any doubts about any aspect of the plant's capability or servicing procedures, you must consult your local BL-Pegson dealer or BL-Pegsons technical department

3.4 Crusher Capacity

In order to obtain the optimum output from the crusher, it's feed should be continuous and regulated. Additionally, all feed should be of a size that will readily enter the crusher chamber and undersize material should be removed from the feed prior to entry to the crusher.

Product curves shown overleaf are typical only, based on average limestone, and indicate the product gradings from the Impactor only. Any natural fines in the feed material which bypass the Impactor are not taken into account. Curves will vary dependant on nature, type and grading of the material being processed. Capacity shown is based on feed material weighing loose, approximately 1.6t/m³ (100lbs/ft) and indicates the throughput of the plant. For suitability of particular applications, please consult your local dealer or BL-Pegson Ltd.



The crusher in the standard plant has a rotor speed of 630rpm and is fitted with 2 long x 2 short 'High Manganese' blow bars. This may have been altered to specific order.

The very variable nature of feed material and crushing applications may require consideration of alternative configurations in order to achieve optimum performance.

Refer to the Addendum '428 Impact Crusher - Guide to Efficient Operation' in Section 11 of this manual for details.

Technical Information for Impact Crusher – standard configuration Refer to the Addendum '428 Impact Crusher – Guide to Efficient Operation' in Section 11 for alternative types of blow bar and rotor speed			
Feed Opening	Rotor Diameter	Rotor Speed	Blow Bar Configuration
1067 x 711mm (28"x42")	1060mm (42")	630rpm	2 x long 2 x short
Maximum Feed Size			
'High Manganese' Blow Bars - 700mm [28"] diagonal length or 400mm [16"] cube			
Estimated Capacity – 150 – 250 mtpb (165 – 275 US tph)			

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Figure 3a Crusher Capacity



3.4.1 Impactor Settings

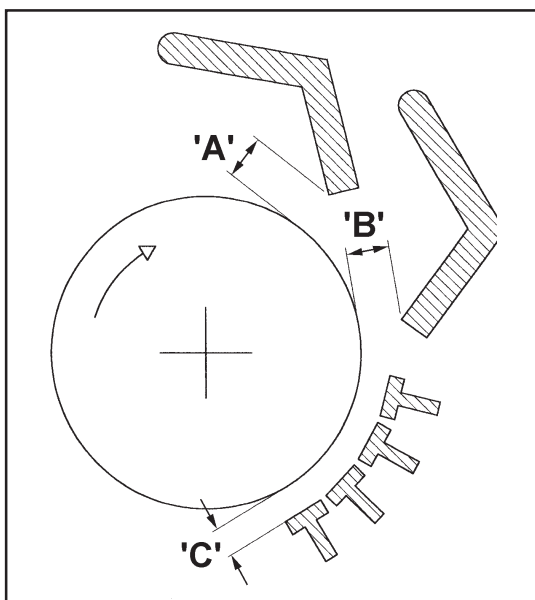


Figure 3b Impactor Setting Gaps

Adjustment	Setting Ratio	Settings mm (ins.)		Setting Ratio
		Minimum	Maximum	
Upper Impact Apron Dimension 'A'	~	60 (2 1/2")	175 (7")	Keep ratio of settings (Upper Impact Apron to Lower Impact Apron) between 2 : 1 and 2.5 : 1
Lower Impact Apron Dimension 'B'	Keep ratio of settings (Lower Impact Apron to Swing Beam) between 1 : 1 and 2 : 1	30 (1 3/8")	85 (3 3/8")	
Swing Beam Liner/Rails Dimension 'C' (optional item)		20 (7/8")	63 (2 1/2")	~

Figure 3c Impactor Min and Max settings

NOTES:

- 1) The Swing Beam (Grinding Path) should be set 0 – 5mm (0 – 0.2") smaller than the desired maximum product size.
- 2) When the optional Swing Beam is NOT fitted, set the Lower Impact Apron at 0 – 5mm (0 – 0.2") smaller than the desired maximum product size.
- 3) Whilst conforming with the Setting Ratios in the table make sure the settings 'A', 'B' or 'C' do not fall outside the minimum and maximum dimensions shown.
- 4) All settings are subject to the suitability of the feed material.



3.4.2 Estimated Product Analysis

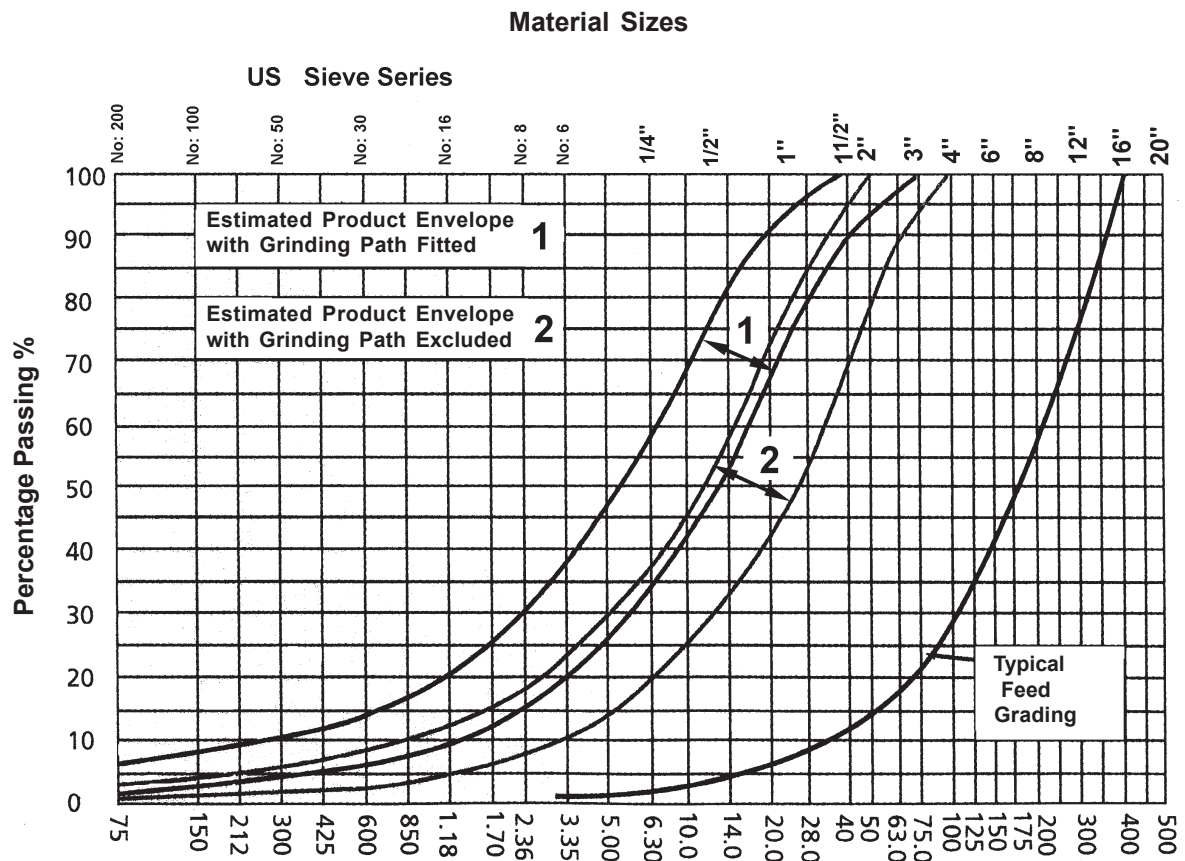


Figure 3d Product Analysis

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4.1 General Information

The BL-Pegson Trakpactor Plant has been designed for a wide range of quarry and recycling applications, its features include:-

- Rapid set up time
- Easily transported on and off site
- 428 Impact Crusher, feed opening 42"x28" (1067mm x 711mm)
- Fully skirted product conveyor
- Two step self cleaning grizzly with under screen (blank mat fitted as standard - mesh optional fitting)
- Facility to direct "grizzly fines" to dirt conveyor and/or bypass crusher
- Heavy duty chassis and track frame
- Remote control
- Dust suppression sprays
- Caterpillar water cooled diesel engine
- Dirt conveyor and magnetic separator fitted as standard
- CE Approved

4.2 Construction Units

BL-Pegson 1067mm x 711mm (42" x 28") Trakpactor Recycling Plant with Diesel/Hydraulic Drive.

4.2.1 Impact Crusher

The BL-Pegson 428 fixed blow bar Impact Crusher has a feed opening of 1067mm x 711mm (42" x 28")

The features of the machine are as follows:-

Crusher Frame:- Fabricated from steel plate and rolled steel sections to form a rugged construction which is fully lined with replaceable liner plates.

Rotor:- Running in two heavy duty self aligning spherical roller bearings and fitted with four reversible and replaceable fixed hammers.

Blow Bars:- Two full size and two half size standard manganese steel blow bars are fitted as standard and are suitable for material recycling applications. They are secured with locking plates and can be turned when worn.

Blow bars are available in alternative materials for crushing applications other than materials for recycling. Please consult the Addendum in Section 11 - 428 Impact Crusher, 'Guide to Efficient Operation'.

Impact Aprons:- Fitted in the front and rear positions and lined with wear resistant impact plates, some of which are interchangeable. The setting is made manually by adjusting rods from the back of the machine.

Drive:- Through vee belts direct from the diesel engine with screw tension adjustment.

Engine Pulleys:- Two are provided, one is supplied fitted and the other is supplied loose. Machines built for stock are fitted with the higher speed pulley as standard to suit general applications. The slower speed pulley will only be fitted against a specific order prior to the plant being completed. Use with appropriate blow bars (see **Blow Bars** above).

Impactor speeds:-

Slow - 504 rpm nominal - 224 mm (8.8") pitch circle diameter engine pulley.

Fast - 630 rpm nominal - 280 mm (11") pitch circle diameter engine pulley.

An optional lower swing beam/grinding path with overload compression springs is available for certain quarry applications. See optional extras (Section 4.2.15) for details.



4.2.2 Vibrating Grizzly Feeder

BL-Pegson 1080 wide x 3800mm long (43' x 12'-6") Vibrating Grizzly Feeder, including:-

Vibrating Unit:- Heavy duty mechanical type with twin counter rotating shafts with oil lubricated bearings and gears.

Pan:- 12mm (0.5") thick abrasion resisting steel bottom plate is included in the welded construction.

Grizzly Section:- Double section of fixed welded tapered finger type bars at 50mm (2") spaces (at discharge end) fabricated in 20mm (0.8") thick abrasion resistant steel. Renewable tips are included on the bars nearest the crusher.

Underdeck:- Supplied with a removable blank rubber mat fitted to allow all grizzly fines to be directed on to the main product conveyor. An optional wire mesh having apertures to pass 20 mm material can be supplied; the screened fines would then discharge to the plant mounted dirt conveyor and the oversize onto the main product conveyor.

Drive:- Hydraulic motor mounted on the vibrating unit.

Control:- Variable speed is achieved via a rotary control located on the Feeder/ Conveyor control box. Facility is also included to stop/start the feeder from the remote control handset (but not to vary the speed).

Hopper:- Fixed feed hopper fabricated in 8 mm (0.3") abrasion resistant steel plate suitable braced with steel sections.

4.2.3 Track Frame

Heavy duty size nine track frame having 160mm (6.3") pitch chain and 3.3m (10'-10") longitudinal centres with 400mm (16") wide tracks fitted as standard.

Total plant weight approximately 33.4 tonne (36.74 U.S. tons)

Overall Track width 2700mm (8'-10")

Plant transport height 3440 (11'-4")

4.2.4 On-Plant Product Conveyor

1000mm (40") wide plant mounted troughed belt conveyor, 3280mm (10'-9") discharge height, having a fixed tail section.

Belt:- Ripstop EP500/3 with 10mm top and 3mm bottom heavy duty rubber covers. A vulcanised joint is included.

Drive:- Hydraulic motor drive via coupling to drive drum at preset speed.

Feedboot:- Fabricated in mild steel plate with abrasion resistant steel liners, access door in one side, and fully skirted wear resistant rubber sealing strips along the entire conveyor length.



Impact Cradle:- This is provided beneath the belt below the impactor outlet.

Adjustment:- Belt tensioning to be maintained and adjustment at the head drum.

Covers:- Canvas type removable dust covers are fitted at the head end.

4.2.5 Dirt Conveyor

600 mm (24") wide side discharge troughed belt conveyor with hydraulic folding facility and having a discharge height of 2060mm (6'-9").

Belt:- EP500 with 3.5mm top and 1.5mm bottom rubber covers. A vulcanised joint is included.

Drive:- Hydraulic motor drive via coupling to drive drum at preset speed.

Adjustment:- Belt tensioning to be maintained and adjusted at the head drum.

2.2.6 Overband magnetic separator

Self cleaning type with permanent magnet, over the on-plant product conveyor with discharge of ferrous metal to the side of the plant. Driven by hydraulic motor with preset speed.

4.2.7 Plant Chutework

Impactor Feed Chute:- Fabricated in mild steel plate with full width single strand chain curtain and rubber curtain. Liners are fitted at wear points.

Grizzly Fines/Bypass Chute:- Fabricated in mild steel plate, is provided with a two-way flap door. Material passing over the blank rubber mat (or optional underscreen) and through the end section of the feeder grizzly bars is discharged to the main product conveyor via the by-pass chute. Material passing through the under screen (when fitted) is discharged to the side dirt conveyor and the flap door will also allow a portion of the material to be diverted to the main product conveyor.

4.2.8 Operators Maintenance Platforms

A steel grid platform is provided on one side of the plant fitted with double row handrails and access ladder. Platforms are also included to gain access to the rear of the crusher and to the power-pack.

DANGER! NOT TO BE USED WHILST THE CRUSHER ROTOR IS SPINNING.



4.2.9 Standard Power-Pack

Caterpillar C9 EU/EC Emission Regulations compliant 6 cylinder, 4 stroke direct injection, emission compliant water cooled diesel power-pack in an steel canopy, 300 HP continuous rated at 1800 rpm under NTP conditions driving the crusher via a manually operated Twin Disc clutch.

Twin hydrostatic drives are provided for the crusher, tracks and also to operate the hydraulic rams. These also power the magnetic separator, conveyors and feeder motors via a solenoid operated directional control valves. All necessary pipe work is to DIN standard 20022 and is provided with steel pipe run to inaccessible areas.

4.2.10 Controls

Controls are fitted on the plant for the feeder (on/off and speed), conveyors etc. with engine and master controls sited in a lockable box mounted below the engine.

A control unit is provided for the tracking function giving a tracking speed of approximately 0.62mph a “creep” facility for loading, off loading and precise slewing movements. This also provides stop and start control for the vibrating grizzly feeder from a remote position.

Emergency stop buttons are provided on each side of the plant.

4.2.11 Chassis

Fabricated steel frame of welded construction with supports for the feeder, crusher, on-plant conveyors, power unit, track frame and the overband magnetic separator.

4.2.12 Guards

Wire mesh or sheet metal guards are provided for all drives, flywheels, pulleys, couplings, gears and vee belts. The guards provided are designed and manufactured to ensure so far as reasonably practicable that the machinery and plant on which they are fitted can be operated safely and without risk to health when properly used.

4.2.13 Painting

The plant is finish painted in RAL 5015 blue.

4.2.14 Dust Suppression Sprays

Spray bars with atomiser nozzles are mounted over the product conveyor feed and discharge points piped to a single inlet manifold for clients pressurised clean water supply.



4.2.15 Optional Extras

Standard optional extras which can be added to plants:-

- Hydraulic water pump assembly for dust suppression.
 - Refuelling pump kit.
 - Belt weigher.
 - Anti-vandal guards
 - Wire meshes for feeder underscreen to separate scalpings at 10, 20, 30, 40 or 50mm (0.39, 0.79, 1.25, 1.5 or 2in).
 - Lower swing beam/Grinding path (not suitable for recycling applications) fitted in the lower position and lined with wear resistant impact plates on the upper section, and reversible manganese impact bars on the lower section.
 - The setting is made as described above. The lower swing beam assembly is an optional part of the machine and is omitted from the standard build. When fitted, greater control on product size is achieved, together with improved product shape.
- BL-Pegson's Sales Department can advise whether the lower swing beam is required following receipt of full application details prior to the machine being built.
- High chrome blow bars (not suitable for recycling applications) or Martensitic steel.



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5.1 Safety Information



WARNING

Loose or baggy clothing can get caught in running machinery.

ALWAYS wear correctly fitting (E.N./A.N.S.I. approved) personal protective equipment.

Personal Protective Equipment includes Hard Hat, Safety Glasses, Hearing Protection, Dust Mask, Close Fitting Overalls, Steel Toed Boots, Industrial Gloves and High Visibility Vest.

PERSONAL PROTECTIVE EQUIPMENT



WARNING

Falling from and/or onto a Terex-Pegson machine can cause serious injury or even death.

DO NOT climb onto the machine whilst in operation.

ALWAYS use the walkways/platforms provided or a safe and secure platform approved by the local regional safety enforcing authority.

ALWAYS use a suitable lifting platform when reaching any points 2m (6' - 6'') or more above ground level.

FALLING HAZARD



DANGER

In-running nip points can cause serious injury or even death.

DO NOT reach into an unguarded machine.

Your arm could be pulled in and amputated.

SWITCH OFF, LOCKOUT & TAGOUT machine before opening or removing guards.

ENTANGLEMENT HAZARD





DANGER

Hydraulic fluid under pressure can penetrate the skin causing serious injury.

ALWAYS relieve the pressure from the hydraulic system before carrying out any kind of maintenance or adjustment.

ALWAYS use a piece of cardboard to check for leaks. **DO NOT** use your hand.

If fluid is injected under the skin, it must be surgically removed or gangrene will result.

Get medical help immediately.

SKIN INJECTION HAZARD



WARNING

When carrying out maintenance or adjustment to the plant the following procedure must be followed.

LOCKOUT PROCEDURE

LOCKOUT PROCEDURE

1. Switch off engine.
2. Remove the ignition key.
3. Keep the ignition key on person during lockout.
4. Place appropriate maintenance warning signs, (ie. TAG OUT).
5. **NEVER** work alone.
6. Turn the Isolation Switch to 'O' when the plant is not being used (especially while plant is being transported).



5.2 Transportation

5.2.1 Manoeuvring

(Refer to Section 7.3)



Prior to attempting any manoeuvring of the plant the tracks must be free of obstructions, including crushed material and fines. Do not push or tow the plant. Failure to observe this warning could result in serious injury to persons and damage to the plant which may invalidate warranty.

- Before manoeuvring the Trakpactor, ensure the feed hopper and crusher are empty, and that all materials have run off the conveyors. STOP the feeder, dirt conveyor, product conveyor and disengage the clutch.
- The plant cannot be manoeuvred in the PLANT mode of operation.
- DO NOT manoeuvre the Trakpactor whilst the crusher running.
- The safety warning horn sounds continuously whilst the plant is being manoeuvred.




DO NOT stand on any of the platforms or ladders of the Trakpactor whilst it is being manoeuvred using the remote control handset.

Ensure all personnel are clear of the plant before manoeuvring.

When manoeuvring your Trakpactor to its operating position make sure you stand well clear of the plant but are in a position to have all-round vision to see any obstacles or hazards that may lie ahead e.g personnel, overhead cables, ditches, unsafe roadways etc. (Refer to Figure 2a Dimensions)

- Make sure that you do not manoeuvre your Trakpactor on a gradient (fore and aft directions) steeper than 30 degrees, damage may occur to the engine and/or plant.
- Avoid manoeuvring the plant over extremely uneven ground or damage may occur.
- Control valves mounted on the engine and beneath the feeder are **NOT** to be used to manoeuvre the Trakpactor. They are for use by BL-Pegson Service Engineers only.

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- Initial start up in cold weather may result in a tendency to steer to the right whilst tracking fast forward due to the hydraulic oil being cold. Run the plant for approx. 10 minutes with the conveyor and feeder running prior to manoeuvring the plant.
- **When transporting the Trakpactor, it is the responsibility of the haulage contractor to safely secure the plant to the transporter.**



To manoeuvre the Trakpactor with the radio remote control hand set (Where fitted)

The plant is manoeuvred using the remote hand held radio transmitter control unit (Fig 5b). This hand set also has the facility to switch the plant feeder on and off whilst the plant is in the crushing mode.

Procedure

1. Observe all safety instructions.
2. Take the Remote Control Hand Set from the Control Box and first become familiar with the functions of all the individual buttons (Figure 5b) before the next step.
Forward = Product Conveyor first
Reverse = Hopper first
3. To start up the handset transmitter first stand well clear of the plant. Hold the hand set with the stop button nearest to the operator and proceed as follows:-
 - Ensure the stop button is pulled out.
 - Depress both of the safety buttons (Fig.5b) at the same time for at least 1 second. Release the safety buttons.
 - The red LED will change to green.
 - The transmitter is in function status when the green LED comes on.
4. Start the engine (Section 7.2). Increase the engine speed to 1800rpm.
5. On the Control Panel located within the Control Box (Figure 5a), turn the Operation switch to 'TRACK'.
6. Press the Horn button for 5 seconds to sound the safety warning horn. This will also ready the tracks for manoeuvring.
7. The radio handset directional buttons (forward, reverse and turn) are double pressure switches with the initial pressure operating the slow speed mode and depressing further operates the higher speed. Press one button at a time to manoeuvre the plant in the desired direction (Figure 5b). Employ the 'Fast' speed only where safe to do so.

	WARNING
	<p>WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 5.1, Safety Information for relevant warning.</p>

Note: The transmitter has a built in safety function that prevents another function from involuntary cutting-in when the transmitter starts. The transmitter will not start if a button is stuck in the activated position. This is indicated by the red LED coming on.



Pressing the Stop button at any time will immediately halt the operation and cut out the engine but it is necessary to manually switch off the engine ignition (Section 8.2) (and disengage the manual clutch).

8. When the Trakpactor is in the correct position, press the Horn button to turn the safety warning horn 'OFF' and disengage the tracks.
9. On the Control Panel turn the Operation switch to 'PLANT'. The safety warning horn will sound for 10 seconds. Stop the engine (Section 8.2), unless required further.
10. To shut down the radio handset transmitter, push in the stop button. Lock out the hand set when finished with to prevent unauthorised use.

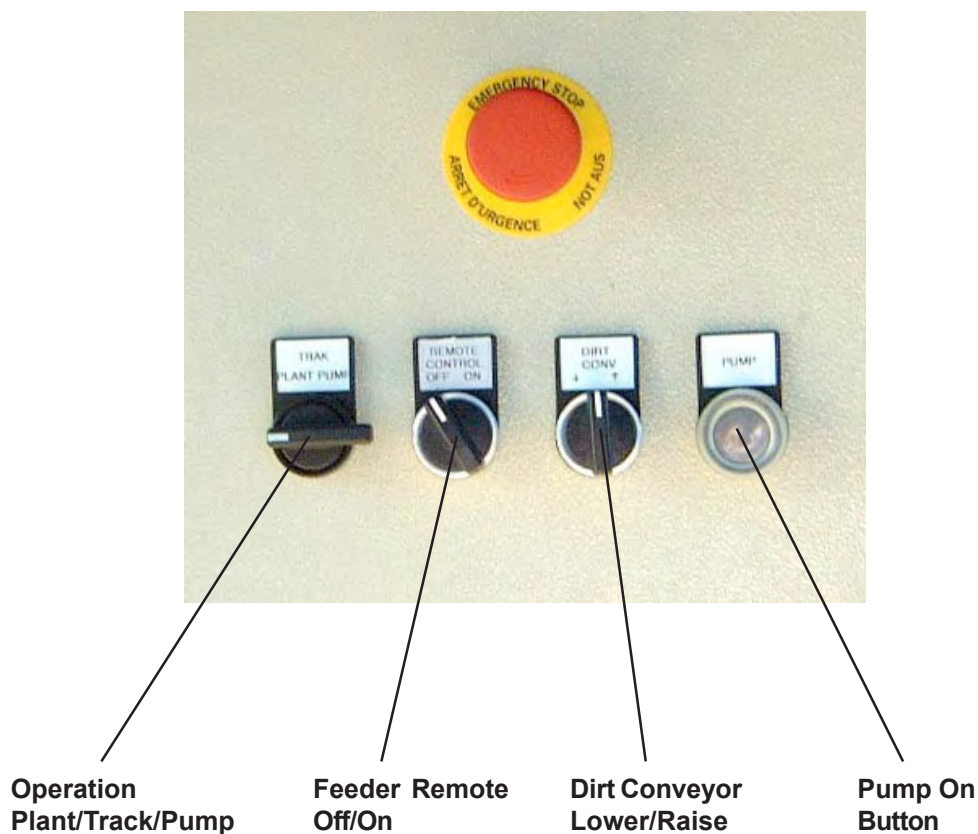
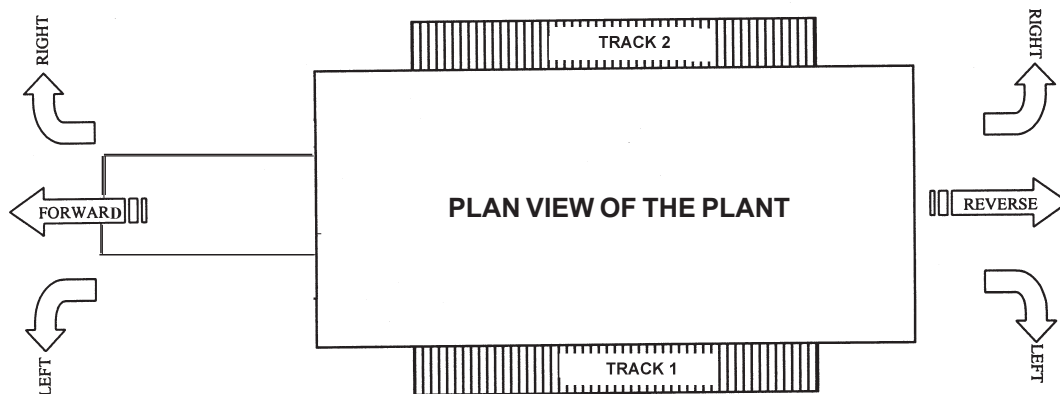










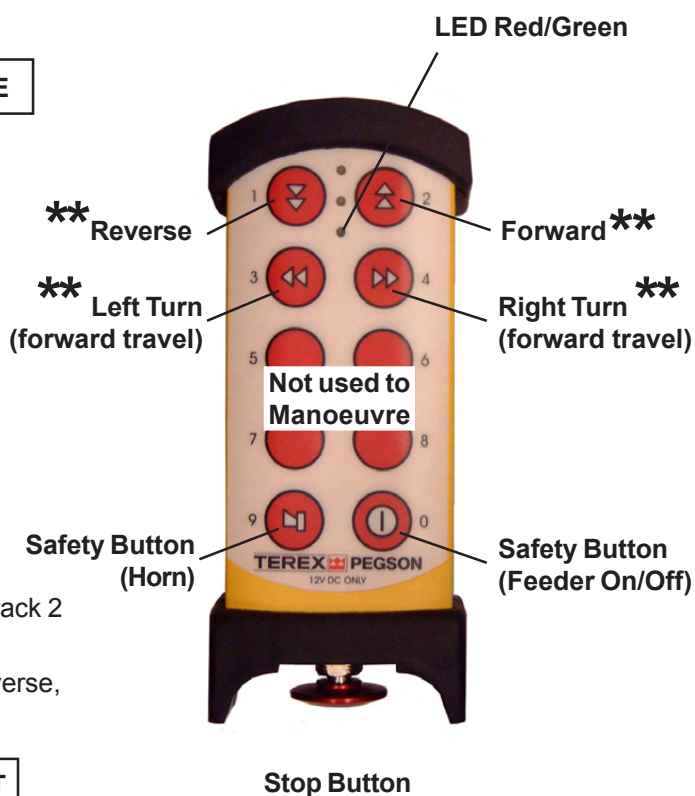
Figure 5a Control Panel



SELECT AND PRESS BUTTON(S) TO MOVE

-  Forward slow or fast, track 1 & 2
-  Right turn slow, forward track 1
-  Left turn slow, forward track 2
-  Reverse slow or fast, track 1 & 2
-  Right turn slow, reverses track 1
-  Left turn slow, reverses track 2
-  Rotate clockwise, track 1 forward, track 2 reverse (second step)
-  Rotate counterclockwise, track 1 reverse, track 2 forward (second step)

RELEASE BUTTON(S) TO STOP MOVEMENT



**** Double pressure buttons - 1st pressure = slow speed / 2nd pressure = fast speed**

For more information on the Radio Hand Set see Section 7 of this manual.



Figure 5b Remote Control Hand Set

5.2.2 Unloading

Procedure

The Trakpactor will arrive on site securely fastened to a low loader. It is the responsibility of the haulage contractor to remove the fastenings.

1. Observe all safety warnings.
2. Position easy slope ramps at the end of the transporter to help with unloading of the Trakpactor.
3. Locate the control box and raise the spring loaded cover to reveal the control panel and engine control panel.
4. Before attempting to start the engine, check that the engine air cleaner is in situ as this may have been removed to reduce the overall plant height for travelling. Refit if necessary.
5. Start the engine (Section 7.2). Increase the engine speed to 1800rpm.
6. Turn the Operation switch to 'TRACK' (Figure 5a). Using the remote control hand set, steer the Trakpactor off the transporter (Section 5.2.1 and Section 7.3).

	<h2 style="margin: 0;">WARNING</h2>
	<p>WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 5.1, Safety Information for relevant warning.</p>

5.2.3 Loading

Before transportation, the Trakpactor must be prepared as described below. Refer to Section 2.1 for minimum travel dimensions.

Procedure

1. Observe all safety warnings.
2. Ensure that both conveyors, feed hopper and crusher are free from stone and dirt.
3. On the right hand side of the Trakpactor raise the bottom section of the front ladder and secure with the bolts (Figure 5c).
4. Remove the dirt conveyor head drum guard (Figure 5d). This is necessary before folding the conveyor for transport.
5. Ensure all loose items are carefully stowed and secured if these are to be transported on the plant.
6. Locate the control box and raise the cover to reveal the control panel and engine control panel.
7. Start the engine (Section 7.2). Increase the engine speed to 1800rpm.
8. Turn the Operation switch to 'PLANT', the safety warning horn will sound for 15 seconds. Turn the Dirt Conveyor


 <h2 style="margin: 0;">WARNING</h2>	
	<p>WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 5.1 Safety Information for relevant warning.</p>
	<p>FALLING HAZARD. Refer to Section 5.1 Safety Information for relevant warning.</p>




Figure 5c Front Ladder (shown unfolded)

switch to ‘↑’ and fold the dirt conveyor fully in to the travelling position. **Secure with the transportation safety chain (Figure 5e)**



During folding of the dirt conveyor ensure that the hydraulic hoses and conveyor belt do not foul any part of the structure.

9. Position easy slope ramps at the end of the transporter to help with loading of the Trakpactor.
10. Turn the Operation switch to ‘TRACK’. Using the remote control hand set, steer the Trakpactor onto the transporter (Section 5.2.1 and Section 7.3).
11. When the plant is loaded shut down the remote control hand set using stop button.
12. Switch off the engine (Section 8.2).
13. In order to reduce the overall plant height to the minimum it is necessary to detach the engine air cleaner (refer to section 2.1 for dimensions)
14. **Securing the Trakpactor to the transporter is the responsibility of the haulage contractor.**

 <h2 style="margin: 0;">WARNING</h2>	
	WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 5.1 Safety Information for relevant warning.
	FALLING HAZARD. Refer to Section 5.1 Safety Information for relevant warning.



Prior to transportation always check the plant for loose or damaged components.

Fasten all loose parts, replace missing items or make repairs as found necessary to ensure that all components are safely secured during transportation.

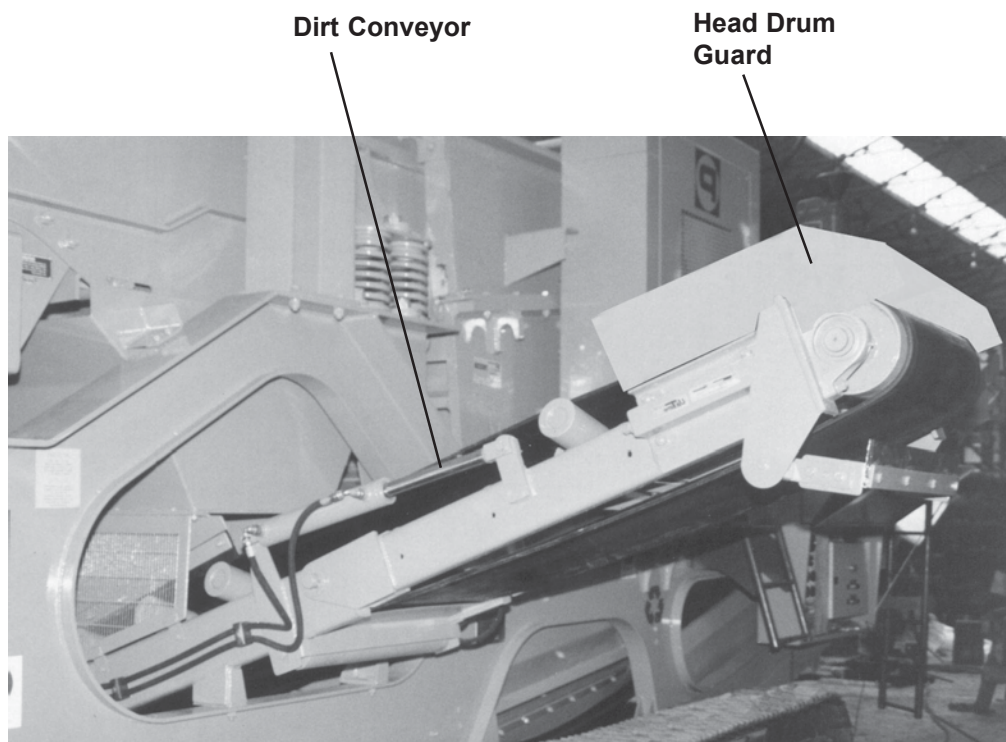


Figure 5d Dirt Conveyor



Figure 5e Dirt Conveyor Safety Chain

Figure 5f Dirt Conveyor Folded and Secured with Chain





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6.1 Safety Information

**WARNING**

Loose or baggy clothing can get caught in running machinery.

ALWAYS wear correctly fitting (E.N./A.N.S.I. approved) personal protective equipment.

Personal Protective Equipment includes Hard Hat, Safety Glasses, Hearing Protection, Dust Mask, Close Fitting Overalls, Steel Toed Boots, Industrial Gloves and High Visibility Vest.

PERSONAL PROTECTIVE EQUIPMENT

**WARNING**

Falling from and/or onto a Terex-Pegson machine can cause serious injury or even death.

DO NOT climb onto the machine whilst in operation.

ALWAYS use the walkways/platforms provided or a safe and secure platform approved by the local regional safety enforcing authority.

ALWAYS use a suitable lifting platform when reaching any points 2m (6' - 6'') or more above ground level.

FALLING HAZARD





DANGER

In-running nip points can cause serious injury or even death.

DO NOT reach into an unguarded machine.

Your arm could be pulled in and amputated.

SWITCH OFF, LOCKOUT & TAGOUT machine before opening or removing guards.

**ENTANGLEMENT
HAZARD**



DANGER

Hydraulic fluid under pressure can penetrate the skin causing serious injury.

ALWAYS relieve the pressure from the hydraulic system before carrying out any kind of maintenance or adjustment.

ALWAYS use a piece of cardboard to check for leaks. **DO NOT** use your hand.

If fluid is injected under the skin, it must be surgically removed or gangrene will result.

Get medical help immediately.

**SKIN INJECTION
HAZARD**





WARNING

When carrying out maintenance or adjustment to the plant the following procedure must be followed.

LOCKOUT PROCEDURE

LOCKOUT PROCEDURE

1. Switch off engine.
2. Remove the ignition key.
3. Keep the ignition key on person during lockout.
4. Place appropriate maintenance warning signs, (ie. TAG OUT).
5. NEVER work alone.
6. Turn the Isolation Switch to 'O' when the plant is not being used (especially while plant is being transported).



6.2 Setting Up

Plant Location Considerations

Prior to setting up your Trakpactor, consideration should be given to a suitable layout to prevent oversize material or tramp metal from entering the plant. In order to prevent bridging of the crusher no material above the size recommended by the manufacturer should be fed into the plant.

Procedure

1. Observe all safety instructions.
2. Position the plant in a safe, level operating position making sure both tracks are in full contact with the ground to minimise movement of the Trakpactor. Pay attention to access from the loading area and to where material is to be deposited (Section 5.2.1), and ensure the area under the tail drum is free of large stones etc. which may cause belt damage.
3. Remove the dirt conveyor transportation safety chain (Figure 6a).
4. Before attempting to start the engine, check that the engine air cleaner is in situ as this may have been removed to reduce the overall plant height for travelling. Refit if necessary.
5. Start the engine (Section 7.2). Increase the engine speed to 1800rpm.

	<h2>WARNING</h2>
	WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 6.1 Safety Information for relevant warning.
	LOCKOUT PLANT. Refer to Section 6.1, Safety Information for Lockout Procedure.
	FALLING HAZARD. Refer to Section 6.1 Safety Information for relevant warning.



6. Keep the Operation switch at 'PLANT' (Figure 6b).
7. Lower the dirt conveyor fully by turning the dirt conveyor switch to '↓' (Figure 6b).
8. Switch off the engine (Section 8.2) and lockout.
9. Replace and secure the dirt conveyor head drum guard and side skirts.



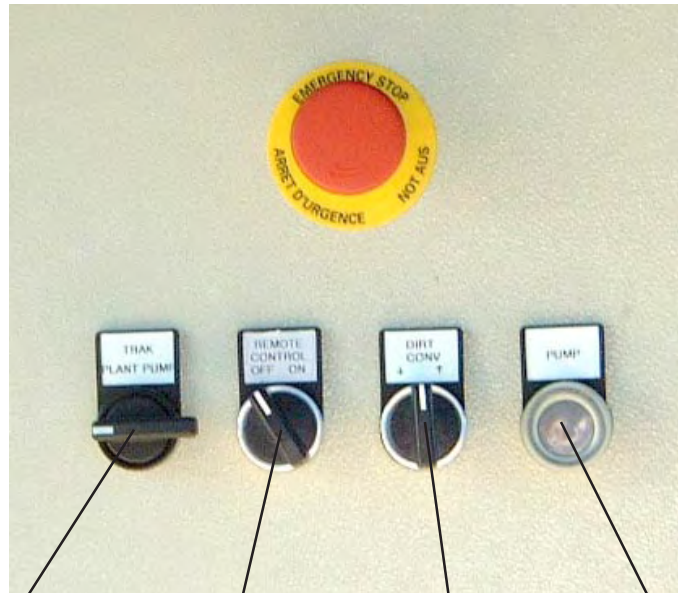
During lowering of the dirt conveyor ensure that the hydraulic hoses and conveyor belt do not foul any part of the structure. Do not operate the plant with the dirt conveyor folded



Dirt Conveyor Safety Chain

Dirt Conveyor

Figure 6a Dirt Conveyor Safety Chain



Operation
Plant/Track/Pump

Feeder Remote
Off/On

Dirt Conveyor
Lower/Raise

Pump On
Button

Figure 6b Control Panel





TEREX
PEGSON

6 - Set Up

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7.1 Safety Information



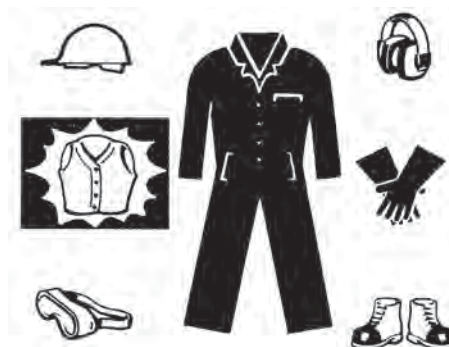
WARNING

Loose or baggy clothing can get caught in running machinery.

ALWAYS wear correctly fitting (E.N./A.N.S.I. approved) personal protective equipment.

Personal Protective Equipment includes Hard Hat, Safety Glasses, Hearing Protection, Dust Mask, Close Fitting Overalls, Steel Toed Boots, Industrial Gloves and High Visibility Vest.

PERSONAL PROTECTIVE EQUIPMENT



WARNING

Falling from and/or onto a Terex-Pegson machine can cause serious injury or even death.

DO NOT climb onto the machine whilst in operation.

ALWAYS use the walkways/platforms provided or a safe and secure platform approved by the local regional safety enforcing authority.

ALWAYS use a suitable lifting platform when reaching any points 2m (6' - 6'') or more above ground level.

FALLING HAZARD





DANGER

In-running nip points can cause serious injury or even death.

DO NOT reach into an unguarded machine.

Your arm could be pulled in and amputated.

SWITCH OFF, LOCKOUT & TAGOUT machine before opening or removing guards.

**ENTANGLEMENT
HAZARD**



DANGER

Hydraulic fluid under pressure can penetrate the skin causing serious injury.

ALWAYS relieve the pressure from the hydraulic system before carrying out any kind of maintenance or adjustment.

ALWAYS use a piece of cardboard to check for leaks. **DO NOT** use your hand.

If fluid is injected under the skin, it must be surgically removed or gangrene will result.

Get medical help immediately.

**SKIN INJECTION
HAZARD**





WARNING

When carrying out maintenance or adjustment to the plant the following procedure must be followed.

LOCKOUT PROCEDURE

LOCKOUT PROCEDURE

1. Switch off engine.
2. Remove the ignition key.
3. Keep the ignition key on person during lockout.
4. Place appropriate maintenance warning signs, (ie. TAG OUT).
5. NEVER work alone.
6. Turn the Isolation Switch to 'O' when the plant is not being used (especially while plant is being transported).





7.1.1 Blocked Crusher Procedures

It is the responsibility of the Owner, End User and/or Safety Officer of the Trakpactor to provide a safe means of dealing with oversize material and construct a safe procedure for unblocking a stalled machine which is full of material.

To comply with British Health and Safety Law it is necessary to conduct an adequate risk assessment of the procedures for unblocking a blocked crusher.

Should an oversize piece of material be fed to a crusher and cause the feed opening to be bridged the recommended procedure for removing this is to open the crusher (as described in Section 9.5) if the bridged material is not accessible otherwise. Only open the crusher slowly with caution and with all personnel well clear. A crane and hook can be used although EXTREME caution must be exercised to ensure that the crane is not overloaded by trying to lift a jammed rock.

The following methods **SHOULD NOT** be attempted:-

The use of wedges.

Using mobile plant to drag stones out of the crusher or feeder.

Under most arrangements pinch bars and hand hammers cannot be used safely. Their use should be limited to situations under risk assessment where there is every indication that they can be worked safely.

In the case of a stalled crusher it should always be treated as possibly being jammed with tramp metal. A safe system of work should be devised for approaching this situation due to the potential dangers of tramp metal being released. Due care and attention should be given to where the released tramp metal will fall to avoid any injury to personnel. Once this has been decided it should be incorporated into a permit to work procedure to be issued by the manager. This system should cover things such as notification to the manager, isolation, methods of removal of excess stone, safe positions for personnel. Should any further information be required with regard to the clearance of blocked crushers then reference can be made to the British Aggregate Construction Materials Industries (BACMI) document "Clearing Blocked Crushers". This document provides recommended procedures and advice on risk assessment.



7.2 Safe Start-Up Procedure



BL Pegson Ltd. cannot overemphasise the need to ensure that all safety aspects are checked before starting the engine.

Whilst the engine is running and the Operation switch is turned from 'TRACK' to 'PLANT' mode the safety warning horn will sound for 10 seconds. When the horn has stopped the conveyor(s) and/or feeder can be started.

- Ensure the engine clutch is disengaged (lever fully towards the crusher drive guard) (Figures 7f).
- Check that all guards are in position and secure and that all personnel are clear of the plant.

With the engine switched 'OFF'

- Ensure the full length of both vehicle tracks are in contact with a firm, level surface.
- Check that the size of the engine pulley is correct for the crushing application (refer to section 4.2.1 for correct pulley size for crushing duty and section 9.11.3 if change required)
- Check that the crushing chamber and feed hopper are empty.
- Measure the crusher settings and adjust if necessary. (Section 9.6)
- Check that the Emergency Stops are pulled out (Figure 1a).



7.2.1 Engine Start-Up

Procedure

1. Observe all safety warnings
2. Ensure the engine Isolation Switch (Figure 7a) is turned to the **I** position.
3. Locate the Control Box and raise the cover to reveal the control panel and engine control panel (Figure 7b).
4. Turn the Operation Switch, located on the Control Panel to 'PLANT' and the Remote switch to 'ON' (Figure 7c).
5. On the engine control panel (Figure 7d) turn on the ignition with the key to the first position and, once the sequence of diagnostic checks is completed, fully turn the key to start the engine. Release the key back to the first position as soon as the engine starts.



NOTICE

Refer to Figure 7e together with continuation page for details of the engine diagnostic functions.

6. Check the engine speed is at 1200 rpm (view on tachometer) and allow to run for 3-5 minutes before proceeding with preparation for transport (Section 5), setting up the plant (Section 6) or initiating the plant run sequence (Section 7).



WARNING



WEAR PERSONAL PROTECTIVE EQUIPMENT.
Refer to Section 7.1, Safety Information for relevant warning.

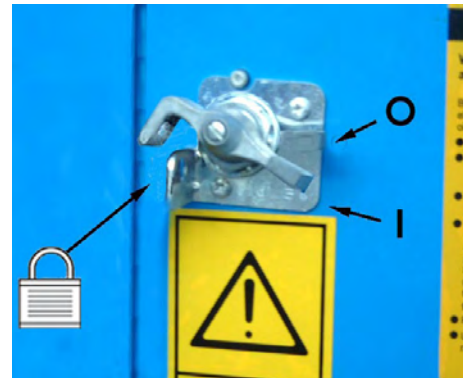


Figure 7a Isolation Switch



NOTICE

To avoid damaging the clutch DO NOT increase the engine speed to the operating 1800 rpm until after starting the crusher (Section 7.2.2)

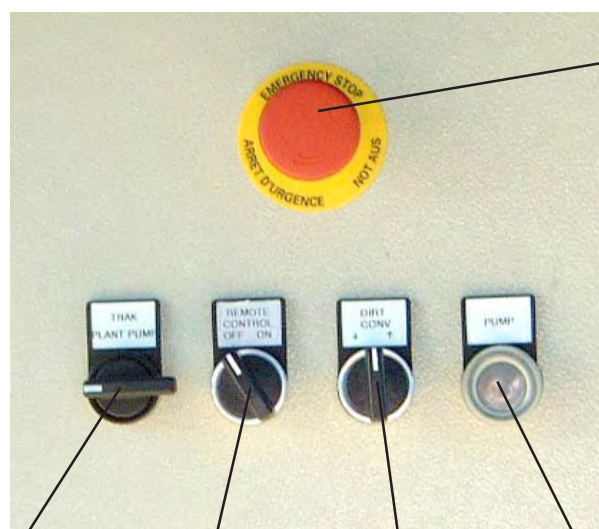


Control Panel

Umbilical Handset Connection Point

Engine Control Panel

Figure 7b Control Box



Emergency Stop Button

Operation

Feeder Remote

Dirt Conveyor

Pump On

Figure 7c Control Panel

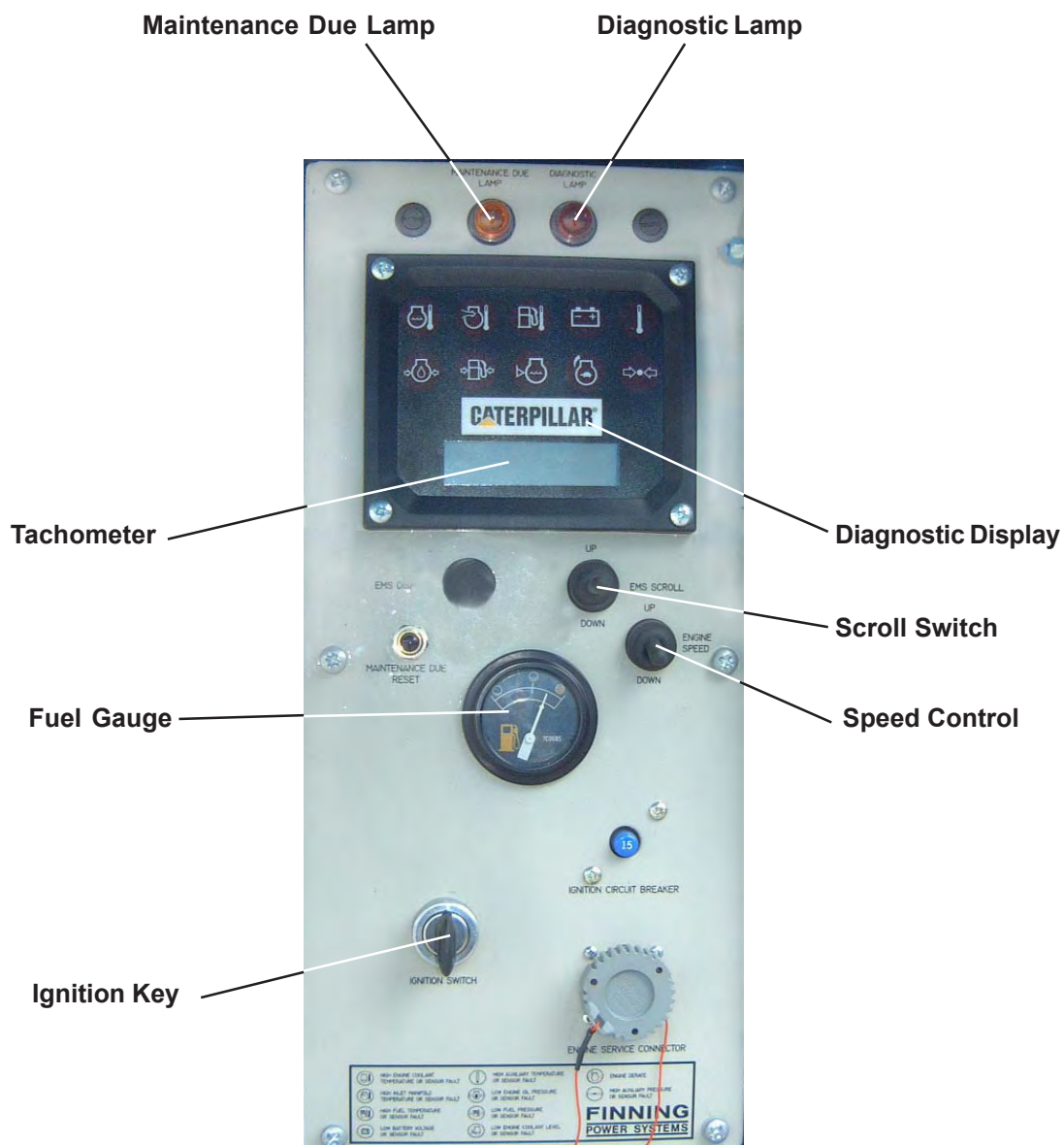
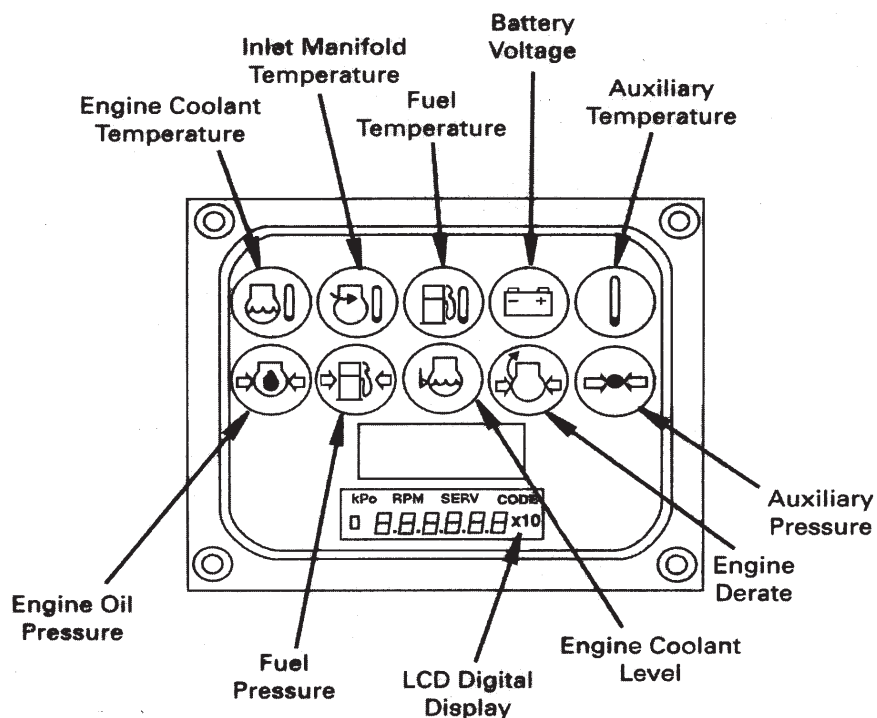


Figure 7d Engine Control Panel



EMS Main Unit



DIAGNOSTIC DISPLAY

The main unit has ten warning lamps available for system related diagnostics. These diagnostics can be used for system troubleshooting and diagnostic information. They are located on the main EMS unit in two rows of five:

- | | |
|---|--|
| High Engine Coolant Temperature or Sensor Fault | Low Engine Oil Pressure or Sensor Fault |
| High Inlet Manifold Temperature or Sensor Fault | Low Fuel Pressure or Sensor Fault |
| High Fuel Temperature or Sensor Fault | Low Engine Coolant Level or Sensor Fault |
| Low Battery Voltage or Sensor Fault | Engine Derate |
| High Auxiliary Temperature or Sensor Fault | High Auxiliary Pressure or Sensor Fault |

Figure 7e Caterpillar Engine Diagnostic Panel

Engine Diagnostic Functions - EMS Main Unit, continued

LCD Display

Beneath the warning lamps is an LCD digital display for engine parameters.

Display Scroll Feature

Each time the scroll forward switch (Figure 7d) is depressed and held, EMS will page through the engine parameters in the order listed below. When the scroll backward is depressed and held, EMS will page through the engine parameters in reverse order. The abbreviation for the parameter will be displayed. When the scroll switch is released, EMS will display the current 'real time' value for that parameter.

Abbreviation	Parameter
Spd	Engine Speed
GA-1	Engine Oil Pressure
GA-2	Coolant Temperature
GA-3	Bateery Voltage
GA-4	Fuel Pressure
Boost	Boost Pressure
IAirT	Inlet Air Temperature
FuelT	Fuel temperature
AccrP	Auxiliary Pressure
AccrT	Auxiliary Temperature
Fuel	Fuel Rate
Hrs	Engine Hours
Load	Engine (Percent) Load

7.2.2 Crusher Engagement

Procedure

With the engine speed set at 1200rpm :-

1. Observe all Safety Warnings.
2. Slowly engage the clutch by pulling the clutch lever away from the crusher drive guard, this will start the crusher (Figure 7f).
3. Using the hand throttle increase the engine speed to 1800 rpm, view on tachometer (NB.engine speed 1800 rpm required under crushing load).
4. Check the plant is stable with no excessive vibration. If necessary, reposition the plant on firm, level area with full length of both tracks in contact with the ground.

	<h2>WARNING</h2>
	<p>WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 7.1, Safety Information for relevant warning.</p>

Crusher Drive Guard



Figure 7f Clutch Lever



7.2.3 Feeder/Conveyor Start-Up



The control valves mounted on the engine and beneath the feeder are **NOT** to be used in any circumstances to operate the feeder or conveyors.

The operation switch on the control panel has to be in 'PLANT' mode for the feeder and conveyors to work (Figure 7c). The safety warning horn will sound for 10 seconds when the Operation switch is turned from 'TRACK' to 'PLANT' mode.

Procedure

1. Observe all safety warnings.
2. With the engine speed at 1800 rpm (engine speed 1800 rpm required under crushing load) continue at the control panel (Figure 7g).
3. Press the 'GREEN' Product Conveyor button to start the product conveyor (fixed speed) and the magnetic overband separator.

(The speed of the magnetic overband separator can be altered, refer to Section 9.13)
4. Press the 'GREEN' Dirt Conveyor (optional) button to start the dirt conveyor (fixed speed).



WARNING



WEAR PERSONAL PROTECTIVE EQUIPMENT.
Refer to Section 7.1, Safety Information for relevant warning.

5. Press the 'GREEN' Feeder button to start the feeder.
The speed of the feeder will need adjusting depending on the type of material to be crushed so as to maintain an even regular flow through the crusher.

To adjust the speed of the feeder turn the Feeder Speed Control knob and adjust to the required setting.

The feeder can be switched ON and OFF remotely (Section 7.3.2). However the speed cannot be adjusted from the remote control handset.

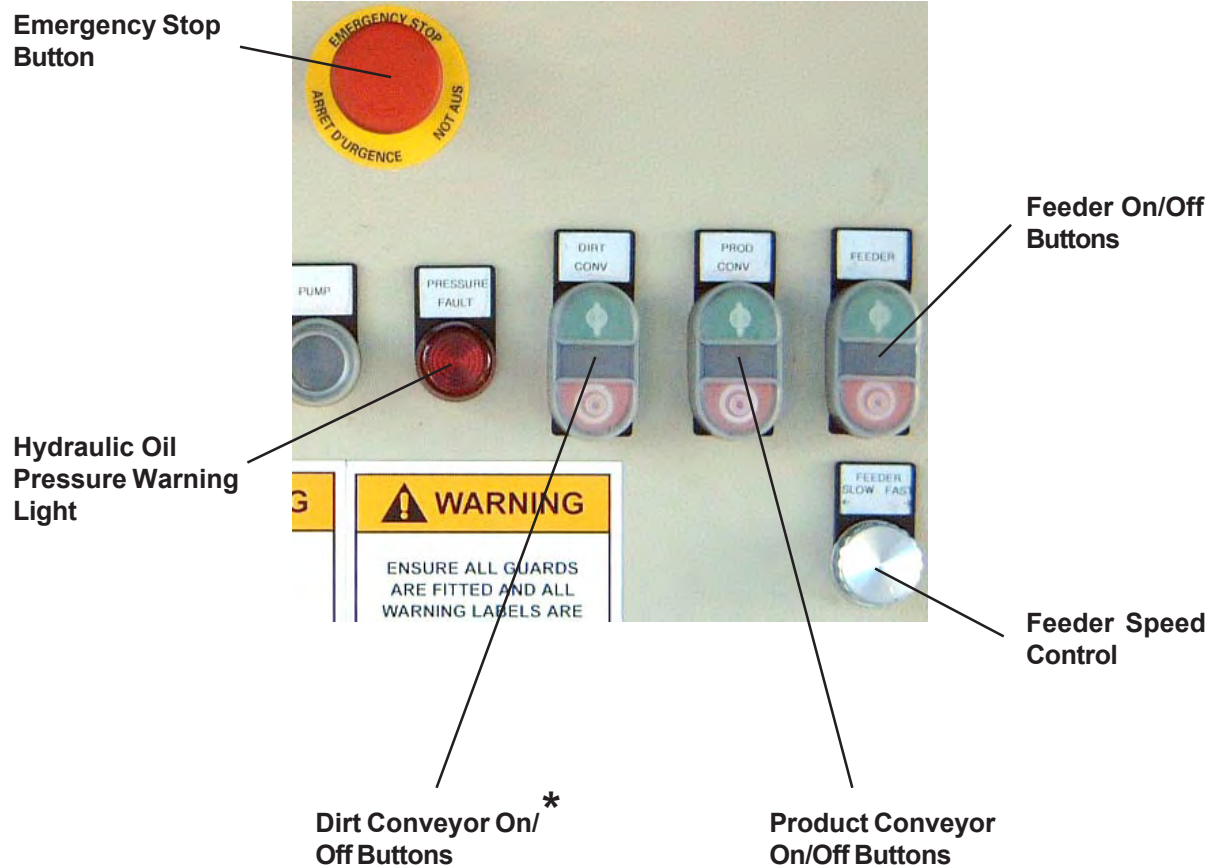


Figure 7g Feeder/Conveyor Controls



7.2.4 Safe Operation of the Plant



NEVER leave your Trakpactor unattended whilst it is in operation.



Do check regularly that the oil cooler fan (located on the Engine Maintenance Platform) is running correctly and that dust/dirt has not built up in the fan and radiator unit (over heating can occur if dust/dirt is allowed to build up). Blow out dust/dirt if necessary.

DO NOT allow a build up of material at the feed on points to enter either the product conveyor or dirt conveyor.

DO check frequently the stability of the Trakpactor. The chassis **SHOULD NOT** bounce during operation.

DO NOT allow the engine RPM to drop below it's operating speed, and **DO NOT** slip the engine clutch.

AVOID frequent starting and stopping of your Trakpactor unnecessarily as it **WILL** cause damage to the plant.

7.2.5 Checks Prior to Initial Daily Start

Plant

- Visually check the plant and ensure that all guards and warning signs (Section 1) are in position and that all equipment and tools that are hazardous to operation are removed from the immediate site.
- Ensure that the impact crusher clutch on the diesel engine is disengaged.
- Ensure that the impact crusher and the grizzly feeder hopper are empty.
- Check setup of the impact crusher and adjust as necessary to the required settings (refer to Sections 3.4 and 9.6).
- Check the oil cooler fan and radiator unit (located on the Engine Maintenance Platform) for any build up of dust/dirt. Blow out dust/dirt if necessary.
- Before putting the plant into operation check that all emergency stop buttons are operative. (refer to Section 8.3)



The plant should be fed by an excavator such that the bucket does not pass over or near to personnel.



DO NOT STAND ON THE UPPER MAINTENANCE PLATFORM WHILST THE IMPACT CRUSHER AND FEEDER ARE OPERATING.

Other than when operating the engine clutch, the impact crusher and grizzly feeder must be stationary and disabled at the engine control panel.

Discontinue loading the feed hopper when the operator is attending to the controls on the feeder/conveyor box.

7.2.6 Initial Start Up and Running In

Initial Start-Up

- Check the vibrating unit oil level and hydraulic oil level (Figure 7h & 7i).
- Refer to engine manual for engine initial start up.
- Run the plant empty for a short period of time and check for abnormal noises, vibration or excessive heat from the shaft bearings.

Actions During Running-In Period



Checks on the Trakpactor are crucial during the first week of operation.

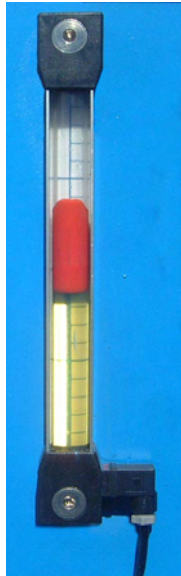
The following section should be read and understood prior to starting the Trakpactor. If there are any doubts, contact BL Pegson Ltd. Service Department.

Plant

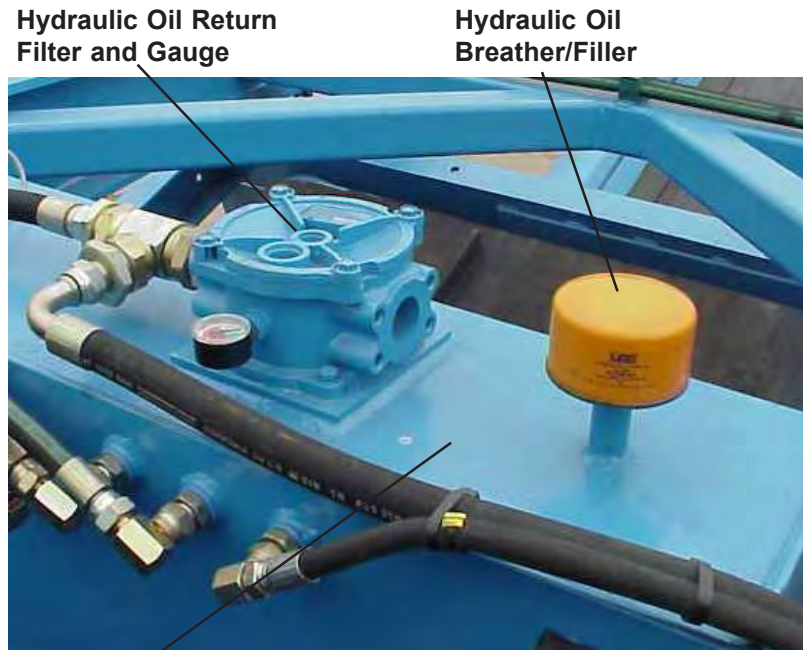
1. Each day during the initial days of operation check the tension of the conveyor belts on the main product conveyor and dirt conveyor..
2. Check frequently the overall stability of the plant; re-check the level of the plant and re-level if necessary.
3. After several days use re-check clutch engagement torque as described in Section 9.15.

Crusher

1. Regularly check drive belts (crusher and hydraulic pumps) to ensure correct tension, particularly during the initial 2 weeks of use (Section 9.11).
2. Check the alignment and tension of the vee belt drive daily during the initial days of operation (Section 9.11).
3. Check the shaft bearing temperature daily using a contact thermometer and



Hydraulic Oil Level

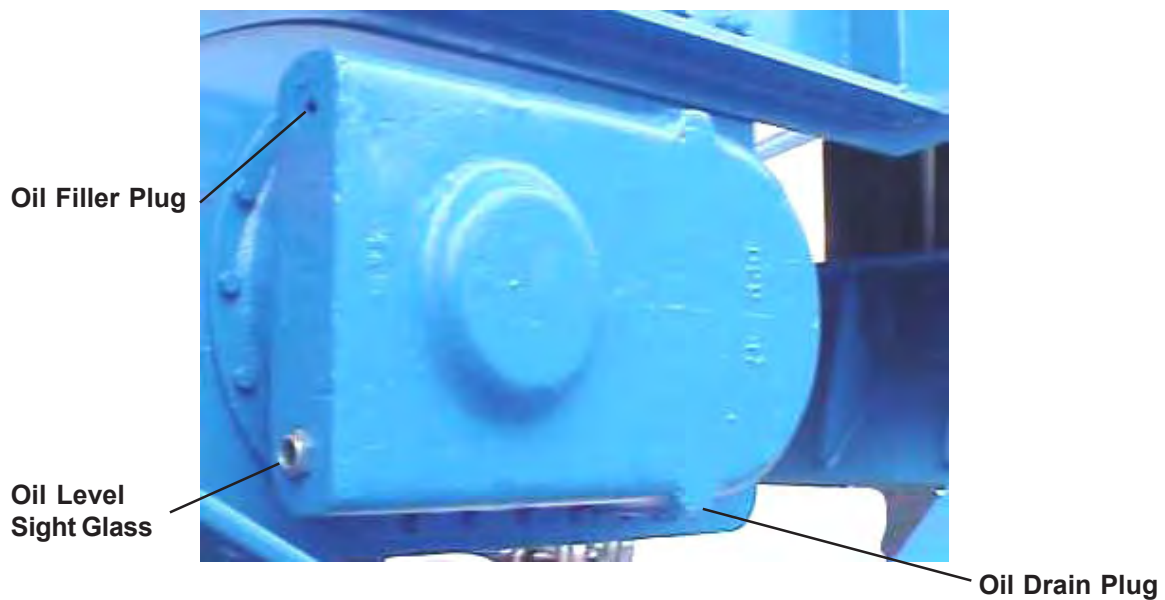


Hydraulic Oil Return
Filter and Gauge

Hydraulic Oil
Breather/Filler

Hydraulic Oil Tank

Figure 7h Hydraulic Oil Tank & Level Indicator



Oil Filler Plug

Oil Level
Sight Glass

Oil Drain Plug

Figure 7i Feeder Vibrating Unit



record for future reference and fault diagnosis. The maximum acceptable working temperature is 80°C (176°F).

4. Avoid overloading the crusher; restrict loading to 50% and 75% of full capacity during the first and second days of operation respectively.
5. Ensure that all drives are running before any feed is introduced to the plant and that the feed is maintained at a constant rate, irregular and excessive feed rates reduce the efficiency of the plant.

Feeder

1. Frequently check the oil levels in the vibrating unit end covers and the hydraulic oil level in the tank (Figure 7h & 7i).
2. After first 8 hours of operation, change the oil in the vibrating unit end covers
3. Check the vibrating unit bearing temperatures using a contact thermometer on the end covers; record for future reference and fault diagnosis. (Maximum acceptable temperature is 80°C [176°F]).
4. Ensure that the vibrating unit is operating before any feed is introduced to the plant fee hopper.



7.3 Radio Remote Control Operation (Where fitted)



DO NOT stand on any of the platforms or ladders of the Trakpactor whilst it is being manoeuvred using the remote control handset.

When manoeuvring your Trakpactor to it's operating position make sure you stand well clear of the machine but are in a position to have all-round vision to see any obstacles, dangers that may lie ahead e.g. personnel, overhead cables, ditches, unsafe roadways etc. (Refer to Figure 2a for dimensions)



The Trakpactor remote control system is supplied to the following:-

Radio System/Umbilical handset.

- To manoeuvre the Trakpactor with the remote hand set, refer to the instructions in Section 5.2.1.
- To use the remote hand set to switch the feeder on/off during crushing operations refer to Section 7.3.2
- For recharging the hand set battery, see Section 7.3.3
- When the plant is not operating take the opportunity to recharge the internal battery. For convenience a lead is supplied to plug into 12/35 volt DC vehicle cigar lighter point
- In the event of the remote radio hand set being inoperable for any reason, the alternative 'umbilical' hand set is supplied (Section 7.3.4).
- If the hand set transmitter does not start when the two safety buttons are depressed at the same time for at least 1 second (Section 5.2.1), check if the stop button is pushed 'in', or the battery needing a recharge.
- If the plant moves out of the operating range of the remote control hand set the plant will stop.
- Operating the stop button on the remote hand set whilst the plant is in either TRACK or PLANT (Feeder Remote switch 'on') operating mode will stop the engine.

7.3.1 Radio Remote Control Hand Set (Where Fitted)

Procedure

(Figures 5b & 7e)

To operate the hand set:-

1. Remove the remote control hand set from the Control Box (Figure 7b).
2. Ensure that the three Emergency Stops on the plant and the stop button on the hand set are pulled out (Figures 1a and 7j).
3. Start the engine (Section 7.2).
4. Refer to Section 5.2.1 if the plant is to manoeuvred to a new position. Refer to Section 7.3.2 if the feeder is to be operated remotely.

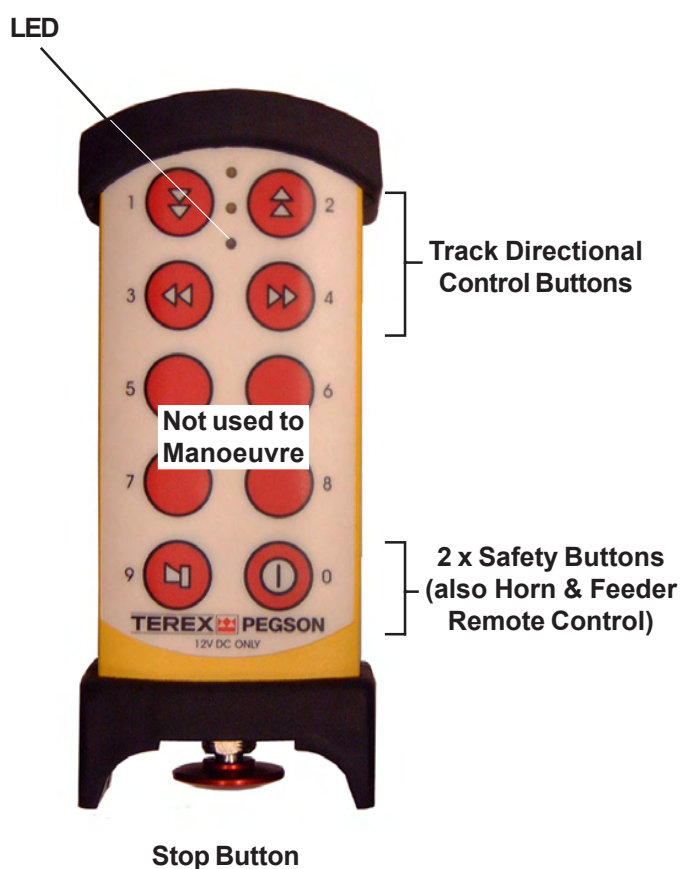




Figure 7j Remote Control Hand Set

7.3.2 Radio Feeder Remote Operation (Where fitted)

To operate the feeder remotely the conveyors and feeder must first be switched on manually and the feeder speed set manually (Section 7.2.3).

Procedure

1. Observe all safety warnings.
2. Remove the Radio Remote Hand Set from the Control Box (Figure 7b).
3. Ensure that the Emergency Stops on the plant and the stop button on the hand set are pulled out (Figures 1a and 7k).
4. Follow the procedures in Sections 7.2.1 to 7.2.4.
5. Stop and start the Feeder by pressing the hand set button (Figure 7k).

	<h2 style="margin: 0;">WARNING</h2>
	<p>WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 7.1, Safety Information for relevant warning.</p>

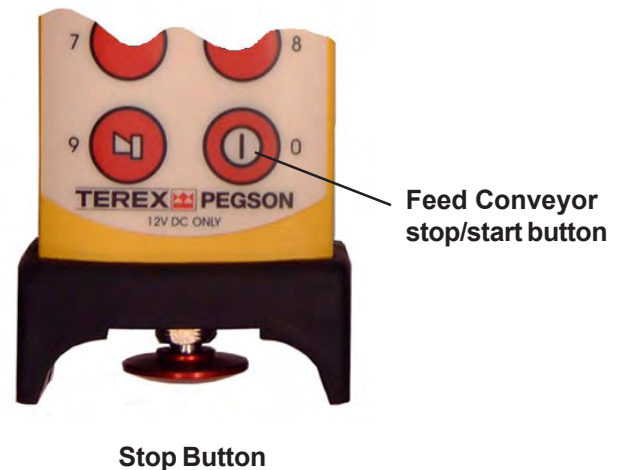


Figure 7k Remote Control Hand Set

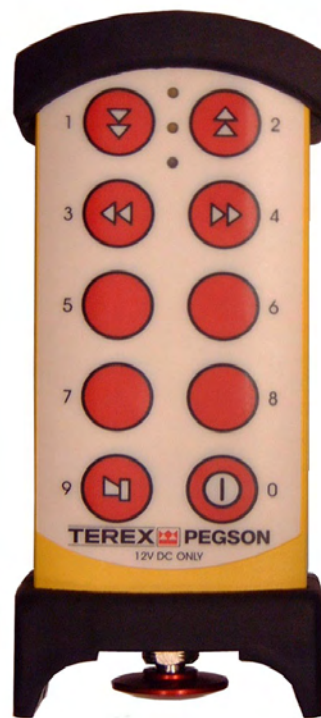
7.3.3 Radio Hand Set (where fitted)

Features of the 860 System include:-

- Unique ID code in each transmitter. The receiver self learns this code, without the need to change DIP switches internally in either component.
- No need to open transmitter to change frequency (changed from buttons - Dealer function). Receiver detects any change automatically.
- Transmitter can be programmed to work with either 840 or 860 receivers (Dealer function).
- Enhanced reliability.

Transmitter's Use NiMh batteries instead of NiCd, which means the following:-

- Input charging voltage is now 12VDC to 35VDC instead of 12/24VDC, no universal adapter required.
- Battery capacity is changed from 800mA to 2000mA. (Charging time from completely empty battery is now approximately 4 hours).
- Operating time with fully charged battery is approximately 30 hours.



TRANSMITTER 860TX-PEG

Buttons 1 to 4 = Used for plant directional control

Buttons 1 to 9 and 0 = Used for signal frequency programming (factory preset - contact Dealer for change)

Buttons 9 and 0 = Used to activate the radio hand set transmitter

Button 9 = Used to activate the audible warning horn

Button 0 = Used to stop / start the plant feeder (where appropriate)





2 versions of the 860 system transmitter will be supplied, one for European Operations and one for the Rest of the World. The only difference is that the European version will include a black stop button. The Rest of the World transmitter will feature a Red Stop button. Channel 01 (434.650 MHz) through channel 16 (433.900 MHz) available in .050 MHz steps. Refer to Dealer if frequency change needed.

Battery Recharging

The remote control handset includes a built in chargeable batteries and a charging contact point on the back of the unit (Figure 71). A 12/35 volt charging lead suitable for plugging into a vehicle cigarette lighter point is supplied.

- Battery charge status is indicated by the LED light in the transmitter;
Red - batteries need charging;
Green - batteries fully charged.
During the charging of the batteries the LED light will be red until changing to green when fully charged. The batteries cannot be overcharged.
- Fully charged batteries provide about 30 hours continuous running and recharging time takes about 4 hours.
- The LED light on the hand set changes from green to red when there is about 10% power left in the batteries (1 hour continuous operation remaining) and indicates it is time to recharge. The plant warning horn will also sound when battery recharging is required

	WARNING
	WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 7.1, Safety Information for relevant warning.

- To conserve the battery charge the hand set should be switched off when not in use..



Charging point

**Figure 71 Remote Control
Charger Connection**

7.4 Alternative Control Hand Set with Umbilical Cable (where fitted)

As an alternative to the radio remote control hand set, a hand set with umbilical cable is supplied to manoeuvre the Trakpactor (Figure 7m)

Connecting and using the Umbilical Control Hand Set

Procedure

1. Observe all safety warnings.
2. Close down the plant (Section 8.2).
3. Locate the connection point on the Control Panel. Release the retaining clip and remove the multi pin plug already in *situ* (only where radio unit fitted). Replace with the umbilical lead plug (Figure 7m) and secure with the retaining clip.
4. On the Control Panel turn the Operation switch to 'PLANT' and the Feeder Remote switch to 'OFF' (Figure 7c).
5. Start the engine (Section 7.2). Increase the engine speed to 1800rpm.
6. **Standing clear of the tracks**, turn the Operation switch to 'TRACKS'.



	<h2>WARNING</h2>
	<p>WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 7.1, Safety Information for relevant warning.</p>



Figure 7m Umbilical Control Hand Set



7. Press the Horn button for 5 seconds to sound the safety warning horn. This will also ready the tracks for manoeuvring.

8. The umbilical handset directional buttons (forward, reverse and turn) are double pressure switches with the initial pressure operating the slow speed mode and depressing further operates the higher speed.

Pressing the Stop button at any time will immediately halt the operation and cut out the engine but it is necessary to manually switch off the engine ignition (Section 8.2) (and disengage the manual clutch if applicable).

9. Hold the hand set with the stop button nearest to the operator and proceed as follows. Press the slow speed buttons on the hand set to manoeuvre the plant in the desired direction (Figure 7n). Employ the 'Fast' speed only where safe to do so.

10. When the Trakpactor is in the correct position, press the Horn button to turn the safety warning horn 'OFF' and disengage the tracks.

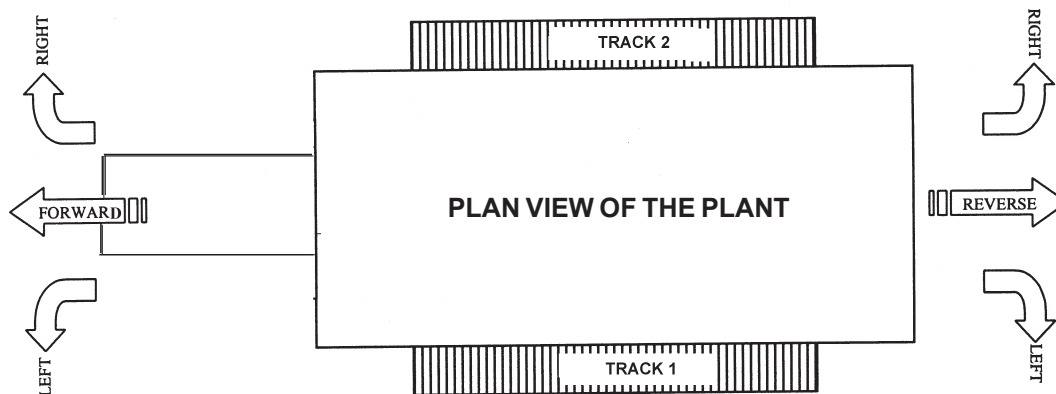
11. On the Control Panel turn the Operation switch to 'PLANT'. The safety warning horn will sound for 10 seconds. Stop the engine (Section 8.2), unless required further.

12. Unplug the umbilical cable and replace with the original plug (where radio unit

fitted). Store the umbilical hand set unit in the tool box to keep available for future use.



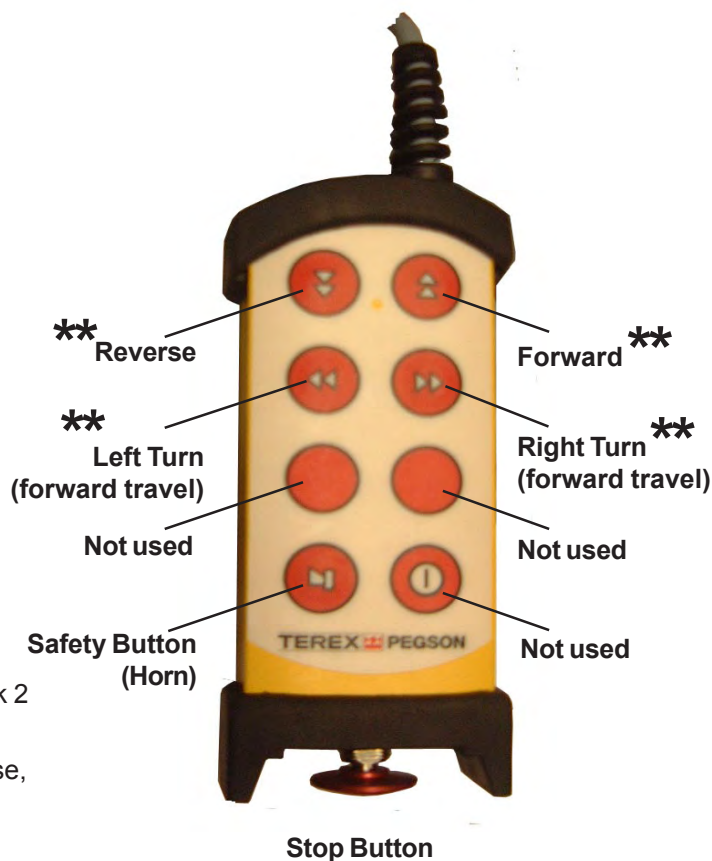
Extreme care must be used when manoeuvring the plant with the umbilical control hand set. Stand as far away as possible from the plant. Do not allow the cable of the hand set to sag and become entangled with the tracks.



SELECT AND PRESS BUTTON(S) TO MOVE

- Forward slow or fast, track 1 & 2
- Right turn slow, forward track 1
- Left turn slow, forward track 2
- Reverse slow or fast, track 1 & 2
- Right turn slow, reverses track 1
- Left turn slow, reverses track 2
- Rotate clockwise, track 1 forward, track 2 reverse (second step)
- Rotate counterclockwise, track 1 reverse, track 2 forward (second step)

RELEASE BUTTON(S) TO STOP MOVEMENT



**** Double pressure buttons - 1st pressure = slow speed / 2nd pressure = fast speed**

Figure 7n Remote Umbilical Control Hand Set

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8.1 Safety Information

**WARNING**

Loose or baggy clothing can get caught in running machinery.

ALWAYS wear correctly fitting (E.N./A.N.S.I. approved) personal protective equipment.

Personal Protective Equipment includes Hard Hat, Safety Glasses, Hearing Protection, Dust Mask, Close Fitting Overalls, Steel Toed Boots, Industrial Gloves and High Visibility Vest.

PERSONAL PROTECTIVE EQUIPMENT

**WARNING**

Falling from and/or onto a Terex-Pegson machine can cause serious injury or even death.

DO NOT climb onto the machine whilst in operation.

ALWAYS use the walkways/platforms provided or a safe and secure platform approved by the local regional safety enforcing authority.

ALWAYS use a suitable lifting platform when reaching any points 2m (6' - 6'') or more above ground level.

FALLING HAZARD





DANGER

In-running nip points can cause serious injury or even death.

DO NOT reach into an unguarded machine.

Your arm could be pulled in and amputated.

SWITCH OFF, LOCKOUT & TAGOUT machine before opening or removing guards.

**ENTANGLEMENT
HAZARD**



DANGER

Hydraulic fluid under pressure can penetrate the skin causing serious injury.

ALWAYS relieve the pressure from the hydraulic system before carrying out any kind of maintenance or adjustment.

ALWAYS use a piece of cardboard to check for leaks. **DO NOT** use your hand.

If fluid is injected under the skin, it must be surgically removed or gangrene will result.

Get medical help immediately.

**SKIN INJECTION
HAZARD**





WARNING

When carrying out maintenance or adjustment to the plant the following procedure must be followed.

LOCKOUT PROCEDURE

LOCKOUT PROCEDURE

1. Switch off engine.
2. Remove the ignition key.
3. Keep the ignition key on person during lockout.
4. Place appropriate maintenance warning signs, (ie. TAG OUT).
5. NEVER work alone.
6. Turn the Isolation Switch to 'O' when the plant is not being used (especially while plant is being transported).





8.2 Closing Down the Plant

Procedure

1. Observe all safety warnings.
2. Ensure that the feeder and crusher are empty, and that all materials have run off the conveyor(s).
3. On the Control Panel (Figure 8a), press the 'RED' Feeder button to Stop the feeder.
4. Press the 'RED' Dirt Conveyor button to Stop the dirt conveyor.
5. Press the 'RED' Product Conveyor button to Stop the the product conveyor and also the magnetic overband separator.
6. Using the speed control, decrease the engine rpm to 1200rpm (Figure 8b & 8d).
7. Disengage the engine clutch by slowly moving the clutch lever (Figure 8c) towards the crusher drive guard (this will disengage the crusher).
8. Let the engine idle for 3-5 minutes.
9. Turn the Ignition Key to the off position to shut down the engine. Remove the Ignition Key. Shut and lock the Control Box door. Lockout the Isolation Switch (Figure 8c). If the radio hand set (where

 <h2 style="margin: 0;">WARNING</h2>	
	<p>WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 8.1, Safety Information for relevant warning.</p>
	<p>LOCKOUT MACHINE. Refer to Section 8.1, Safety Information for Lockout Procedure.</p>

fitted) has been in use, shut down by depressing the stop button on the unit.

10. Following the closing down procedure above, it is recommended that at the end of operation for the day the plant is routinely cleaned down and thoroughly examined to check for any damage, breakages, wear, leaks etc. which should be rectified before further operation.



Use of high pressure washing equipment is to be avoided where the ingress of water will be detrimental to plant components eg crusher bearings, conveyor bearings, hydraulic tank, electrical equipment etc.

Do not use the emergency stop buttons for routinely stopping the plant.

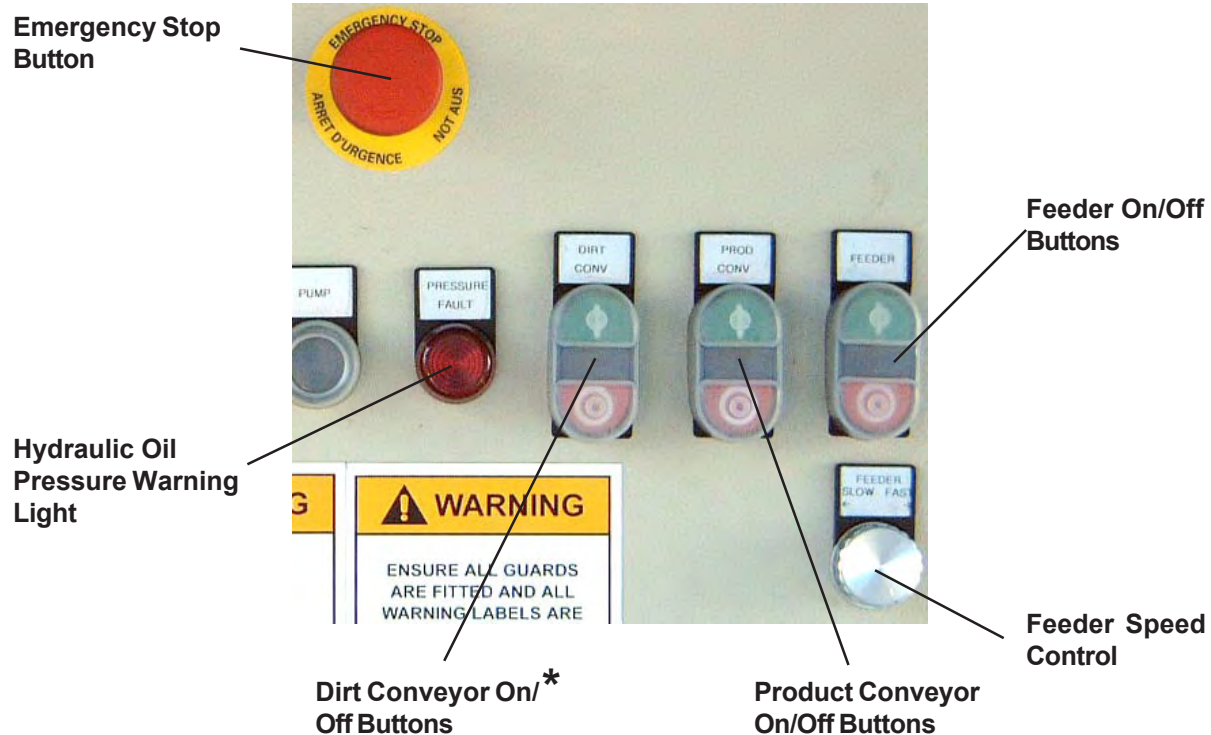


Figure 8a Feeder/Conveyor Controls



Figure 8b Clutch Lever
(manual clutch)



Figure 8c Engine Isolation Switch

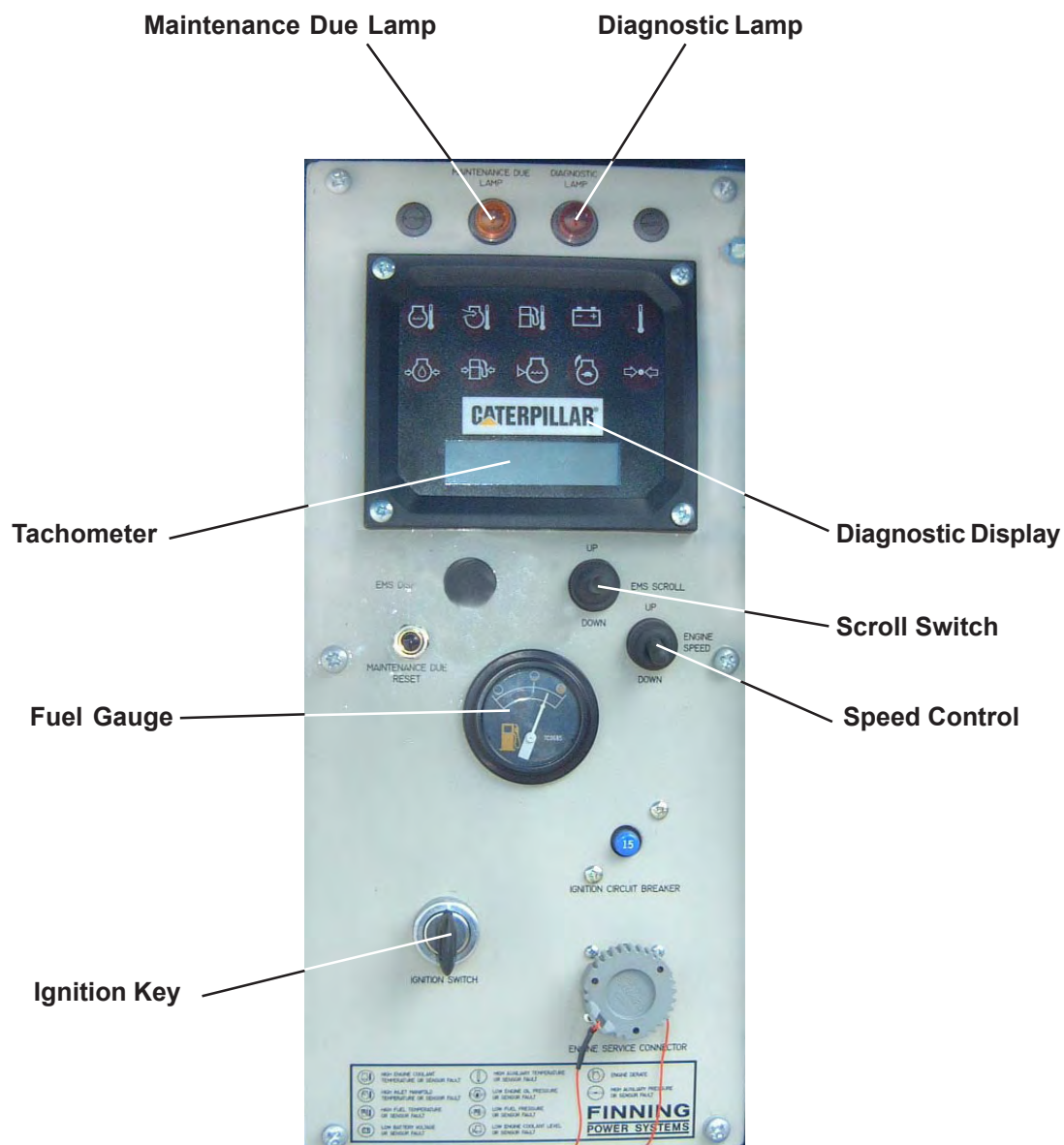


Figure 8d Engine Control Panel



8.3 Emergency Stopping of the Engine

IN AN EMERGENCY STOP SITUATION, STOP THE ENGINE (AND PLANT OPERATION) USING THE EMERGENCY STOP BUTTONS.

(See Section 1, Figure 1a, for locations of all the emergency stop buttons).

When the plant has been stopped using the emergency stop button the Ignition Switch stays 'on'. Immediately turn the key to the off position.



When an emergency stop has been initiated, **DO NOT** attempt to restart the engine until it is safe to do so.

In the event of an emergency stop operation leaving material in the Impact Crusher, this MUST be cleared prior to restarting. Refer to Section 7.1.1 for Blocked Crusher Procedure.

Before restart (Section 7.2.1 to 7.2.3) ensure the engine clutch is manually disengaged. Delay starting the feeder until material left of the conveyors and screen has cleared.

If the emergency stop button is then released whilst the Ignition Switch is in 'on' position' the safety warning horn will sound for 10 seconds before the engine can be restarted. (Section 7.2).

8.3.1 Emergency Stop Buttons

Pressing any of the buttons will stop the diesel engine and the button will remain engaged until physically released by pulling or twisting (depending upon the type fitted) the button knob. The engine cannot be started if any of the emergency buttons remain depressed

8.3.2 Testing Buttons



Daily, before commencing crushing operations, test each emergency stop button is operative.

Procedure

1. Observe all safety warnings
2. Follow the safe start-up procedure (section 7.2)
3. Start the engine (section 7.2.1)
4. Test each emergency stop button in turn to cut out the engine and, following the resetting of the tested button, repeat the process for each of the other emergency stop buttons (Section 1.7) and also the stop button on the remote control handset (Figure 5b).

The emergency stop button on the main control panel can be tested during the 10 second warning prior to engine start in which case the sound will cease if the button is operative.

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9.1 Safety Information



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HAZARD****DANGER**

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**SKIN INJECTION
HAZARD**



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When carrying out maintenance or adjustment to the plant the following procedure must be followed.

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LOCKOUT PROCEDURE

1. Switch off engine.
2. Remove the ignition key.
3. Keep the ignition key on person during lockout.
4. Place appropriate maintenance warning signs, (ie. TAG OUT).
5. NEVER work alone.
6. Turn the Isolation Switch to 'O' when the plant is not being used (especially while plant is being transported).



WARNING

Welding on a Machine/Unit equipped with the Electronic Engine

Before welding on a machine/unit equipped with an electronic engine, the following precautions should be observed

- Turn the Engine Control Switch to the 'OFF' position,
- Disconnect the **NEGATIVE** battery cable at the battery. If a battery disconnection switch is provided, open the switch.
- Disconnect multi-pin connectors from the Electronic Control Module (ECM) located on side of engine.
- Connect the welder ground cable directly to the member to be welded. Place the ground cable clamp as close as possible to the weld to reduce the possibility of welding current damage to bearings, hydraulic components, electrical components and ground straps. **Do not use electrical components , the ECM or Electrics Ground Stud for grounding the welder.**
- Protect wiring from the welding debris or splatter.
- Use standard welding techniques to weld the materials together.

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WARNING



PRIOR TO ANY MAINTENANCE

- The maintenance instructions are intended for day to day maintenance to keep the plant in good running order and do not cover major rectifications, repairs or replacements where specialist expertise is required. However, ensure that only suitably competent personnel with the necessary training/experience for the task(s) in hand are employed. **A person should never work alone.**
- **Observe the safety advice in Sections 1 and 9.1 as appropriate to the task(s) in hand.**
- Read the appropriate manual literature relevant to the operation in hand. Carry out a Risk Assessment for all maintenance operations. Have suitable lifting equipment available for the components involved together with all necessary (and suitable) tools/equipment ready for the task(s) in hand and always secure parts liable to movement **before** starting work.
BL-Pegson's Service Department is available for advice when required.
- The plant should be completely emptied of material i.e. stone. Implement the 'Lockout Procedure' (Section 9.1). Display a prominent 'tag' at the control station (or other appropriate place) to warn of maintenance work being carried out.
- Keep clear of moving parts when trying to identify or isolate any unusual noises.
- Fit dismantled parts in the same location from which they were removed.
- Ensure that the area surrounding the maintenance site is clear of any obstructions.
- If arc welding work is involved in any maintenance operation, ensure that the current does not pass through any bearings.
The plant must be fully isolated prior to any welding work.
- **BEFORE WORKING ON THE PLANT, SWITCH OFF, 'LOCKOUT' AND 'TAGOUT'**

AFTER EXTENSIVE MAINTENANCE

Refer to Section 7.2.5 'Checks Prior to Initial Daily Start Up' and 7.2.7 'Initial Start Up and Running In'.



9.2 Weights of Components

Weights of crusher and feeder assemblies, these should be consulted when arranging suitable lifting equipment.

Component		
	Weight – (kg)	Weight - (lb)
Rotor Shaft Assembly	3204	7065
Rotor	1250	2756
Rotor Shaft	339	748
Bearing Housing	101.3	223
Bearing	41.5	91.5
Inner Labyrinth	25.5	56.2
Outer Labyrinth	4.22	9.31
Outer Labyrinth	126	278
Blow Bar	214	472
Crusher (complete)	10690	23520

NOTE: FOR INDIVIDUAL WEIGHTS OF THE IMPACT CRUSHER LINER PLATES PLEASE REFER TO THE PARTS LISTS IN SECTION 10



WARNING

All weights given are for guidance only and appropriate allowances should be applied for the sizing of lifting or transporting equipment.



9.3 General Information

When performing maintenance, always observe rules provided in the safety Section.

Breakdown caused by insufficient or improper maintenance will cause high repair costs and long term standstill. Therefore, regular maintenance is imperative.

In addition to several other factors, the reliability and life of the Trakpactor depends on regular and proper maintenance.

The following Section contains maintenance instructions as well as maintenance schedules for normal operating conditions.



When the Trakpactor is operated in extreme climatic conditions, e.g. below -10°C or above 40°C (+14° to + 104°F) or in very dusty conditions for a longer period of time, the maintenance schedules will change.

Ask your local BL-Pegson dealer or BL-Pegson Technical Department for advice.

The plant has been designed to facilitate easy routine maintenance, but where necessary to remove any guards make sure that they are replaced before the machine is restarted.

Refer to the Spare Parts illustrations (Section 10) to identify the machinery components mentioned in the maintenance procedures.



**PRACTICE SAFE
MAINTENANCE**



**Understand service procedure
before doing any work. Keep
area clean and dry.**

**Never lubricate, clean, service
or adjust machine whilst it is
moving.**

**Keep hands, feet and clothing
clear of power driven parts and
in-running nip points.**

**Disengage all the power and
operate controls to relieve
pressure. Stop the engine.
Implement lockout procedure.
Allow machinery to cool.**

**Securely support any machine
elements that must be raised
for service work.**

**Keep all parts in good
condition and properly
installed. Attend to damage
immediately. Replace worn or
broken parts.**

**Remove any build up of
grease, oil or debris.**

**Disconnect battery ground
cable (-) before making
adjustments on electrical
systems or welding on
machine.**

9.4 Plant - Lubrication and Servicing

9.4.1 Lubrication Points

Regular lubrication of the plant machinery in accordance with the Lubrication and Servicing Schedule (Section 9.4.4) is **essential**.

The locations of the lubrication points are as follows:-

- Crusher rotor shaft bearing housing grease nipples (5)
- Feeder vibrating unit bearing oil baths on both sides of the feeder vibrating unit (Section 7.2.6 and Figure 7i).
- On-plant product conveyor head and tailshaft bearing grease nipples located on the bearing housings (tailshaft piped to grease points on plant chassis sides).
- Track unit gearbox (2) oil levels (Section 9.16.3).
- Dirt conveyor head and tailshaft bearing housing grease nipples (tailshaft piped to grease points on plant chassis sides).
- Overband magnetic separator head and tailshaft bearing housing grease nipples (tailshaft piped to grease points on the plant chassis sides).
- Periodically lubricate hinges, cylinder pivot pins and similar points with oil to prevent seizure during lengthy spells of inactivity.

	WARNING
	WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.
	LOCKOUT PLANT. Refer to Section 9.1, Safety Information for Lockout Procedure.
	FALLING HAZARD. Refer to Section 9.1, Safety Information for relevant warning.



The overband magnet assembly is very powerful and permanently charged. The strong magnetic field produced could affect heart pacemakers, watches, credit cards, mobile phones etc. The operator has the sole responsibility to keep anyone at risk clear of the machine.



9.4.2 Regular Servicing

The Lubrication and Servicing Schedule (Section 9.4.4) lists, in addition to the lubrication points, the attention required to the hydraulic system (Section 9.9).

Particular attention should be paid to institute a regime of strict adherence from the start of operations for all aspects of routine maintenance.

Keep a detailed Maintenance Log of all work carried out, recording faults experienced and actions taken, details of routine maintenance, personnel name(s), method statements, parts fitted, consumables used, dates, hours run, etc. etc. Also note any extended periods when the plant is inactive and steps taken for protection whilst the plant is laid up.

NOTE: Do not overlook the service requirements of the plant diesel engine which are detailed in the engine manufacturer's manual. Also attend to the service requirements of the clutch as detailed (Section

 WARNING	
	WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.
	LOCKOUT PLANT. Refer to Section 9.1, Safety Information for Lockout Procedure.
	FALLING HAZARD. Refer to Section 9.1, Safety Information for relevant warning.



9.4.3 Daily, Weekly and Monthly Checks



It is imperative that the operator carries out regular and diligent checks before operating the plant especially with operational safety in mind including (but not limited to) those listed below.

Additionally, the operator should always consider what particular safety hazards could occur at specific operating sites and take steps to eliminate them before commencing work.

Daily Checks

1. Check that all guarding is complete and properly secured prior to start up. Also that all warning signs (Section 1.8) are present and readable.
2. Check that all the plant emergency stop buttons are operative (Section 1.7)
3. Carry out a general inspection of the plant to ascertain that nothing untoward is out of place or damaged so as to cause a safety hazard.
4. Carry out daily lubrication schedule (Section 9.4.4).
5. Attend to Track Maintenance (Section 9.16.3).

 WARNING	
	WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.
	LOCKOUT PLANT. Refer to Section 9.1, Safety Information for Lockout Procedure.
	FALLING HAZARD. Refer to Section 9.1, Safety Information for relevant warning.

6. Check the crusher shaft bearing temperatures using a contact thermometer and record for future reference and fault diagnosis. The maximum acceptable working temperature is 80°C (176°F)

Weekly Checks

1. Perform all checks on the daily check list.
2. Lubricate to the weekly schedule. (Section 9.4.4)
3. Check the area around the rotary impactor for build-up of material; clean out as necessary.
4. Ensure all hydraulic hoses and joints are free from leaks.
5. Lubricate the crusher rotor bearings.

6. Check drive belts for damage, wear and fraying.
7. Check crusher rotor, blow bars etc. for security and wear/damage.
8. Check crusher setting.
9. Clean away dust, dirt and grit from maintenance platforms and any moving parts.
10. Check side wall liners for wear damage and security.
11. Check both aprons and, if fitted, the swing beam adjusters for security wear and damage.
12. Check conveyor belts for damage and fraying.

Monthly Checks

1. Perform all checks on the daily and weekly check list
2. Lubricate to the monthly schedule (Section 9.4.4)
3. Visually examine the rotary impactor, liners and aprons for wear and damage. Renew as necessary.
4. Inspect crusher drive belts for signs of wear, renew as necessary.
5. Inspect both crusher aprons and, if fitted, the swing beam adjustment mechanisms for wear and damage. Renew as necessary.

	<h2>WARNING</h2>
	<p>WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning</p>
	<p>LOCKOUT PLANT. Refer to Section 9.1, Safety Information for Lockout Procedure.</p>
	<p>FALLING HAZARD. Refer to Section 9.1, Safety Information for relevant warning</p>

6. Check all drive belts are at the correct tension.
7. Clean oil strainers and filters. Inspect for metal chips or flakes indicating excessive bearing pressure or bearing failure.



9.4.4 Lubrication and Servicing Schedule

428 Trakpactor Lubrication Schedule

Frequency of Lubrication:

X = Change

O = Check, top up or clean as necessary

R = Re-grease

Schedule based on a 40 hour operating week. Adjust schedule to suit actual operating hours.

No of Locations	Description	Lubricant	Quantity	Daily	Weekly	2 Weekly	Monthly	Bi-Monthly	Other
2	Crusher Shaft Bearing grease nipples	D	30g (1oz) each			R			
3	Labyrinth Lid (left and right)	D	5g (0.2oz) each		R				
4	Crusher Door Ram Bearing grease nipples	D					R		
-	Nuts of Lower Apron adjusting assy	Multi-purpose grease	3g (0.1oz) each		R				
1	Feeder Drive side filler plug	See chart	To middle of sight glass	O			X(200 hours)		
1	Feeder Non-drive side filler plug	See chart	To middle of sight glass	O			X (200 hours)		
4	On-Plant Conveyor Head & Tail Shaft bearing grease nipples	D				R			
4	Dirt Conveyor Head and Tail Shaft bearing grease nipples	D				R			
1	Hydraulic Reservoir	See chart	360 litres (96US galls)		O				X (annually)
2	In-line Hyd Filters (inside engine canopy)	-		O					X 1000 hrs sooner if indicator shows RED
1	Hyd Suction Filter (bottom of hydraulic reservoir)	-			O				
1	Hyd Return Filter (top of hydraulic reservoir)	-			O				
2	Tracks	See chart	approx 5 litres (1.3 US galls) ±10%				O		X (annually)

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NB. Refer to the separate engine & clutch manuals for the lubrication schedules & specifications for those items. Where the Optional Magnetic Separator is fitted, regrease the head and tailshaft bearings same as the Plant Conveyors.



428 Trakpactor Lubricants, Oils & Fuel Types

Equipment	Grade	Century	Mobile	Shell	Esso	Gulf	BP
428 Impact Crusher Shaft bearings (grease) All temperatures	D	Regulus A2EP	Mobilux EP2	Alvania EP2	Beacon EP2	Gulfcrown EP2	Energrease LS-EP2
Vibrating Feeder Oil Bath Lubrication >15°C (59°F) 4°C to 15°C (39°-59°F) < 4°C (39°F)	C B A	Centlube H76 Centlube F76 Centlube E76	Mobilgear 634 Mobilgear 630 Mobilgear 629	Omala 680 Omala 220 Omala 150	Spartan EP460 Spartan EP220 Spartan EP150	EP LUB HD460 EP LUB HD220 EP HD MULTI H	Energol GR-XP460 Energol GR-XP220 Energol GR-XP150
Conveyors & Magnet Shaft Bearings Grease (all temperatures)	D	Regulus A2EP	Mobilux EP2	Alvania EP2	Beacon EP2	Gulfcrown EP2	Energrease LS-EP2
Plant Hydraulic System <30°C (86°F) >30°C (86°F)	F G	Centraulic PWLB Centraulic PWLC	Mobil DTE25 Mobil DTE26	Tellus 46 Tellus 68	Nuto H46 Nuto H68	Hydrasil 46 Hydrasil 68	Energol HLP-HM46 Energol HLP-HM68
Track Tension	D	Regulus A2EP	Mobilux EP2	Alvania EP2	Beacon EP2	Gulfcrown EP2	Energrease LS-EP2
Track Gearboxes	SAE 80W/90 Gear Oil						

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Note: >15°C (59° F) is defined as a daily temperature consistently ABOVE 15°C (59° F)
< 4°C (39° F) is defined as a daily temperature consistently BELOW 4°C (39° F)
>30°C (86° F) is defined as a daily temperature consistently ABOVE 30°C (86° F)

Diesel Engine

Lubricating Oil

Coolant

Fuel

Engine Clutch

Refer to the Caterpillar Engine Operation & Maintenance Manual

Refer to the Twin Disc Clutch Operation and Maintenance Manual



Lubrication Specifications

Oil Specification	Grade A	Grade B	Grade C
Flashpoint: Minimum °C (°F)	199 (390)	204 (399)	216 (421)
Pour Point °C (°F)	-18 (0.4)	-18 (-0.4)	-18 (-0.4)
Kinematic Viscosity at 40°C, mm²/s (104°F, in²/s)	150 (0.232)	220 (0.341)	460 (0.713)
Kinematic Viscosity at 100°C, mm²/s (212°F, in²/s)	15.4 (0.0238)	20.1 (0.0312)	32.9 (0.051)
Viscosity Index	105+	105+	105+
Timken OK lb. Minimum	50	50	50
Extreme Pressure Agent	Yes	Yes	Yes
R & O Agent	Yes	Yes	Yes
Anti Foaming Agent	Yes	Yes	Yes
Copper Strip Corrosion Test Pass	Yes	Yes	Yes
ISO VG	150	220	460
Grease Specification	Grade D		
NGLI Grade Number	2		
Unworked Penetration at 25°C (77°F)	280		
Worked Penetration at 25°C (77°F)	285		
Drop Point °C (°F)	185 (365)		
ASTM Corrosion Test Pass (14 days)	Yes		
Wheel Bearing Test Pass at 135°C (275°F)	Yes		
Timken Test lbs. Pass	40/50		
Extreme Pressure Agent	Yes		
Hydraulic Oil Specification	Grade E	Grade F	Grade G
ISO VG No	32	46	68
Kinematic Viscosity at 40°C mm²/s (104°F, in²/s)	32 (0.049)	46 (0.0713)	68 (0.105)
Kinematic Viscosity at 100°C mm²/s (212°F, in²/s)	5.5 (0.085)	6.5 (0.010)	8.5 (0.013)
Viscosity Index	95+	95+	95+
Rust Inhibitor	Yes	Yes	Yes
Defoament	Yes	Yes	Yes
Anti Scuff	Yes	Yes	Yes

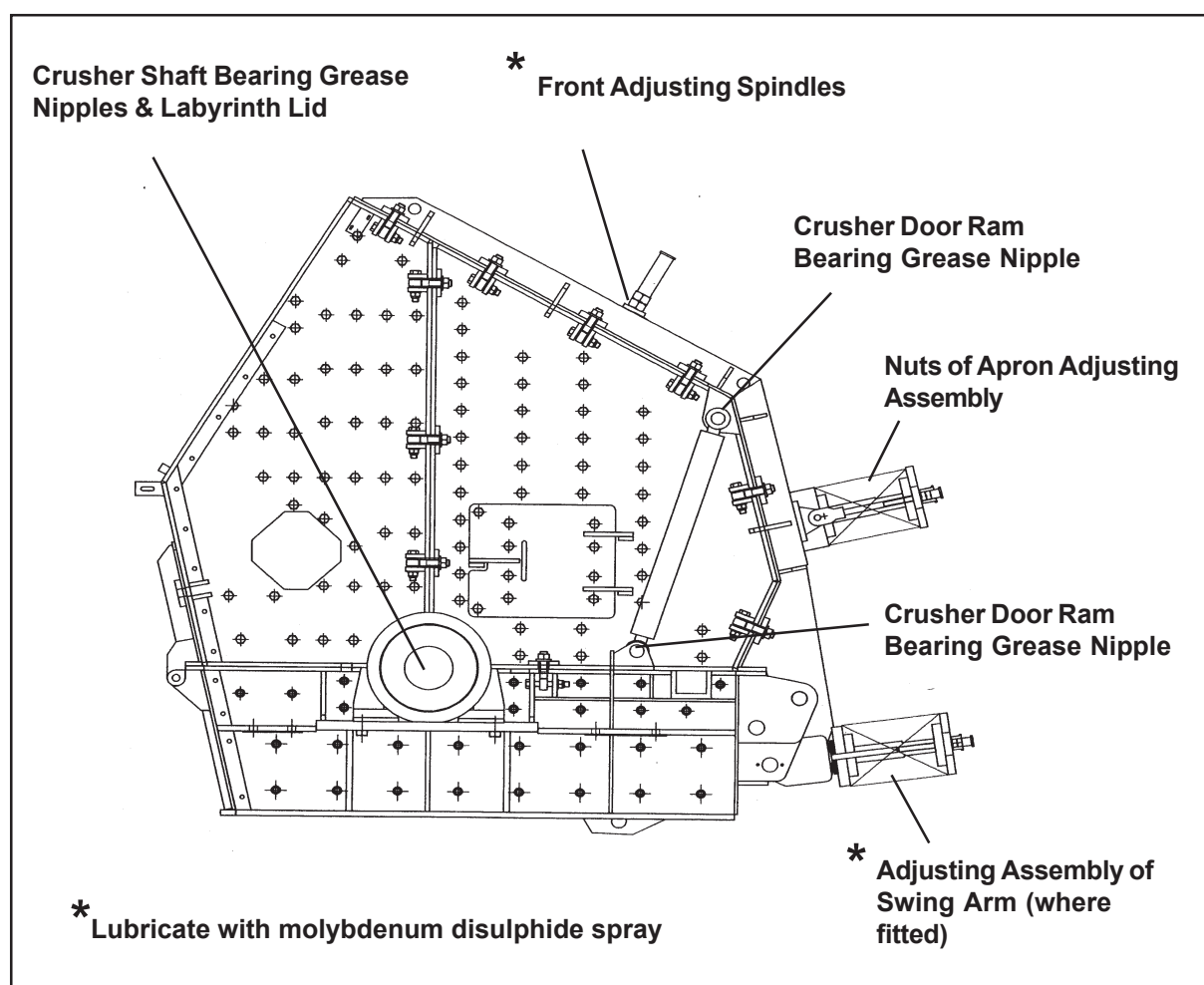


Figure 9 Crusher Lubrication Points

9.5 Crusher - Opening and Closing

Access to the inside of the Impact Crusher body is gained by first releasing some of the swivelling eye bolts on the crusher body and then operating the hydraulic rams to open the pivotted upper frame of the crusher.

The crusher upper frame opens in two modes depending upon the servicing required for the machine. By releasing only the internal swivelling eye bolts ('A' in Figure 9a) the rotor is accessed whereas by only releasing the outer eye bolts ('B' in Figure 9a) only the top of the body is raised for access to the impact aprons area.



WARNING

Both sets of bolts must NOT be undone at the same time and it is essential that when requiring to change from one opening mode to the other that the crusher body should be completely closed off (Section 9.5.3) before attempting to reopen (Section 9.5.2) into the other mode.

All maintenance on the impact crusher must only be carried out when the plant lockout procedure has been carried out and the crusher rotor is stationary.

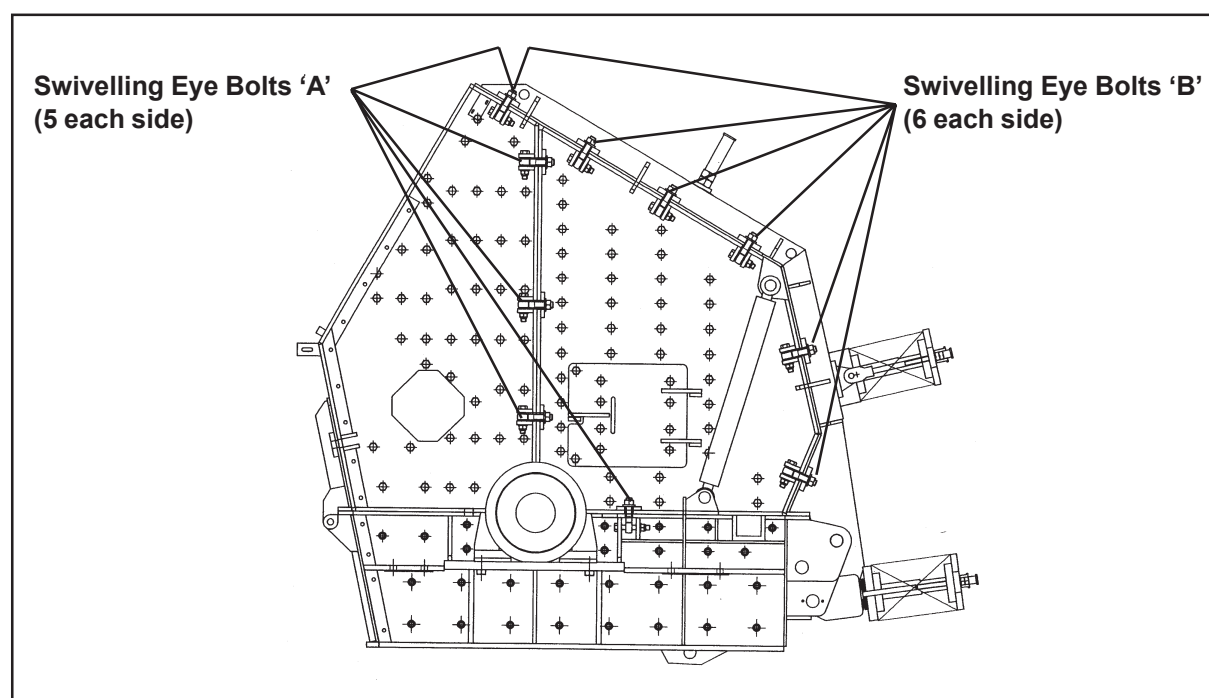


Figure 9a Swivelling Eye Bolts

9.5.1 Safety Cutout Switch

Before opening the crusher, the following safety check must be carried out


DANGER



ENTANGLEMENT HAZARD

DEATH OR SERIOUS INJURY will result from contact with moving rotor or flying material.

Entry by authorized, trained personnel only. Lockout/tagout equipment prior to entry. Keep doors closed, latched and bolted except when performing maintenance. Open door only to perform maintenance after rotor comes to a complete stop.

Safety Cutout Switch. Before opening the crusher, the following safety check must be undertaken:

- Run feeder and crusher empty of all material.
- Close down the plant and implement the Lockout Procedure. Refer to User Manual.
- Check safety cutout switch and wiring for any signs of physical damage.
- Secure chains to protective caps of upper apron adjusters.
- Release outer swivel eye bolts.
- Turn Ignition Key to first position and then select pump mode.
- Depress pump button and using manual lever, open crusher until there is approximately 25mm (1") between top of upper frame and main body.
- Select plant mode on control panel.
- Ensure everyone is clear of the machine and all emergency stops are released.
- Attempt to start the engine.

No cranking of the engine should occur. If the engine attempts to start, lockout the machine and contact your dealer to investigate the problem. Do not attempt to run until the fault has been corrected.
- Implement the Lockout Procedure and refer to the user manual before proceeding with maintenance.

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9.5.2 Opening the Crusher



Before attempting to open the crusherbody make sure that all tools and personnel are evacuated from the maintenance platform.

Procedure

1. Observe all safety warnings.
2. Run the crusher until completely empty. Close down the plant (Section 8.2) and implement the lockout procedure.



A safety cut-out switch on the crusher body prevents the engine being turned over or started whilst the crusher body is open .

3. Secure both of the Front Apron Adjusting Mechanisms (Figure 9g) with the chains (D) to the protective caps (A) to hold the mechanisms in place when the crusher body is open. **Failure to do this will result in damage to the plant.**
4. Depending upon the access required, loosen the swivelling eye bolts 'A' or 'B' on the crusher flange and rotate them through 180° **Ensure that only one set of bolts 'A' OR 'B' (Figure 9a) have been released before attempting to open the crusher body, ie. NOT both sets of bolts undone at the same time.**

	WARNING
	WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.
	LOCKOUT MACHINE. Refer to Section 9.1, Safety Information for Lockout Procedure.



5. On the main Control Panel turn the Plant/Track/Pump operation switch to the 'PUMP' position.
6. Next (after replacing the engine isolation key) turn the engine ignition switch to position 'I'. **(although the engine ignition has to be 'on' the engine does not require to be started and cannot not be cranked over)**. The warning horn will sound but this is irrelevant to this operation.
7. To operate the hydraulic rams press (and keep depressed) the button marked 'PUMP' and at the same time operate the control lever on the hydraulic valve on the maintenance platform. Avoid prolonged use of the pump to avoid draining the engine battery.
8. **Using the two locking pins provided always lock the crusher door in the open position. (Figure 9c).**
9. Turn the engine ignition switch to position 'O' and implement the lockout procedure.

Hydraulic Valve Lever



Locking Pin Location

Locking Pin



Figure 9c Locking Pin & Crusher Open-Locking Pin Location



9.5.3 Closing the Crusher




Procedure

1. Observe all safety warnings.
2. Remove the two locking pins from the crusher door and keep safe for future use.



Before attempting to close the crusher body make sure that all the opened swivelling eye bolts are folded back from the mainframe flange and that all tools and personnel are evacuated from the maintenance platform.

3. Reverse the lockout procedure and turn the engine ignition switch to position 'I' **(although the engine ignition has to be 'on' the engine does not require to be started and cannot be cranked over.)** The warning horn will sound but this is irrelevant to this operation.
4. On the main control panel turn the Plant/Track/Pump operation switch to the 'PUMP' position.
5. To operate the hydraulic rams press (and keep depressed) the button marked 'PUMP' and at the same time operate the control lever on the hydraulic valve on the maintenance platform. Avoid prolonged use of the pump to avoid draining the battery.




 WARNING	
	WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.
	LOCKOUT MACHINE. Refer to Section 9.1, Safety Information for Lockout Procedure.



6. Turn the engine ignition switch to the 'O' position and implement the lockout procedure.
7. Rotate the swivelling eye bolts through 180° and thoroughly tighten.
8. Detach the chains (D) from the Protection caps (A) on the Front Apron Adjusting mechanisms (Figure 9g). **It is essential these chains are detached before operating the crusher in order to allow movement of the Front Apron.**



After blow bars, apron liners or swing arm rails have changed, the gap settings **MUST** be checked, and adjusted if necessary, to within the permissible limits (Sections 3.4 and 9.6) before attempting to start the crusher otherwise serious damage could occur if the rotor is not free to turn.

 WARNING	
	WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.
	LOCKOUT MACHINE. Refer to Section 9.1, Safety Information for Lockout Procedure.

9.6 Crusher - Adjustment

Adjustments are required to the impact crusher to enable the product size to be varied and to compensate for wear on the aprons, swingbeam (where fitted) and blow bars. Refer to Section 3.4, Figure 3c for the setting gaps.

It is **most important** that settings between the rotor blow bars and the front and rear aprons and also the swing beam (optional), if fitted, do not exceed the minimum or maximum dimensions given in Figure 3b and that ratios are maintained between the front and rear apron settings and between the rear apron and the swing beam (if fitted) otherwise any warranty may be invalidated.

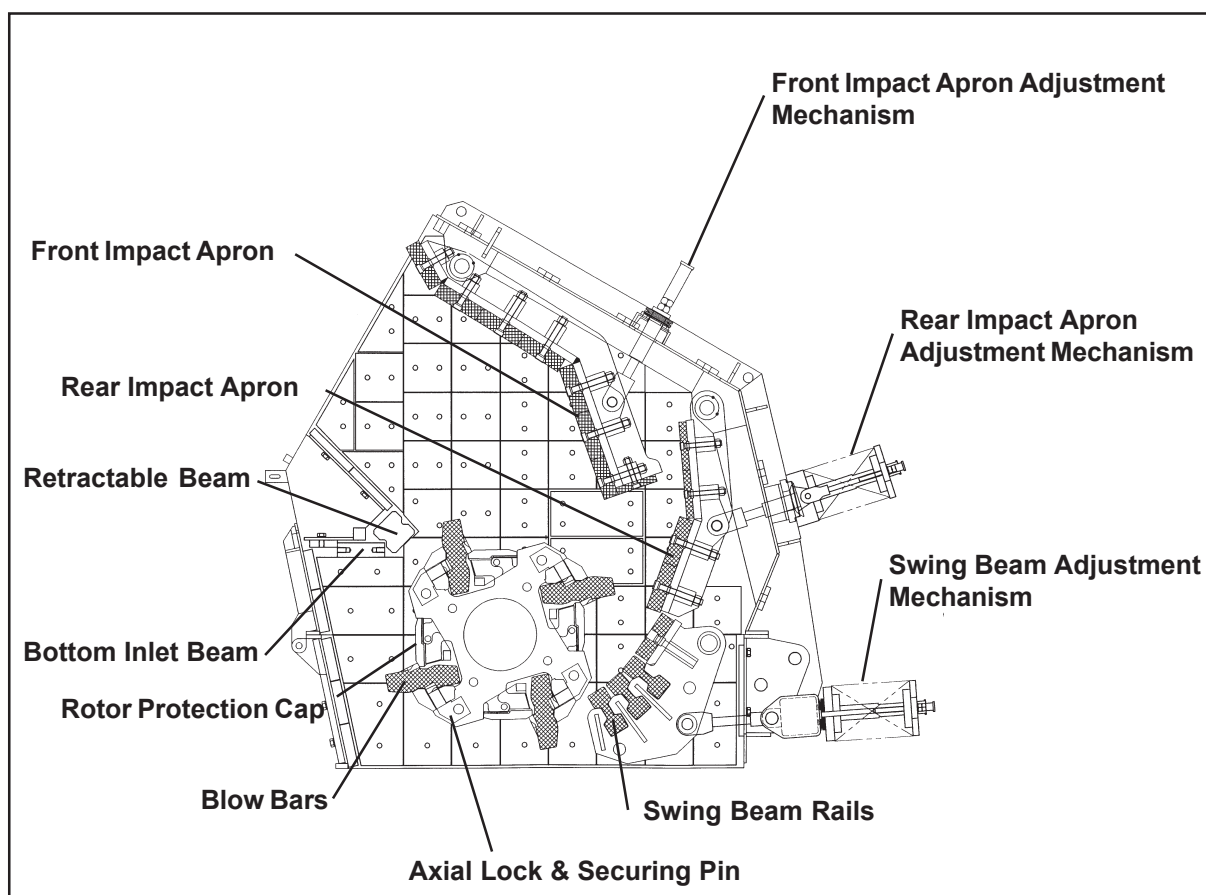
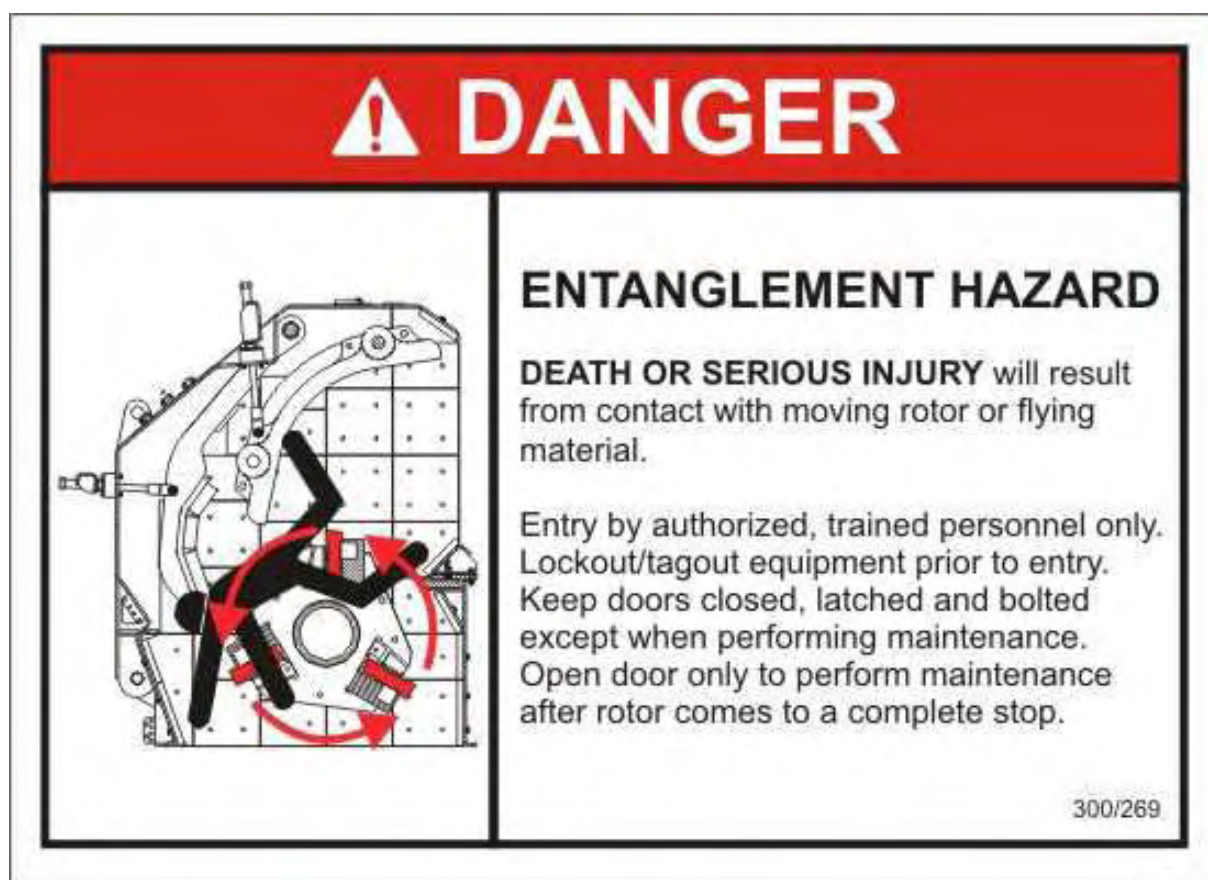


Figure 9d Impact Crusher Parts

9.6.1 Entanglement Hazard for Inspection Door

Keep doors (Figure 9f) closed, latched and bolted except when performing maintenance.



9.6.2 Adjusting the Front Impact Apron



After any maintenance and before starting the crusher, ensure the rotor can turn without any impedance. Check the distance between the ‘long’ blow bars (Section 9.7.1) and impact plates and if necessary adjust the impact aprons and swing arm

See Section 3.4.1 Impactor Settings

Procedure

1. Observe all safety warnings.
2. Run the crusher until completely empty. Close down the plant (Section 8.2) and implement the lockout procedure.
3. Only when the rotor shaft is stationary open the upper inspection doors on the side of the crusher (Figure 9f).



Do NOT in any circumstances open the Upper Inspection Doors whilst the crusher is running.

4. Measure the smallest gap between **each** blow bar and the lowest wear plate of the Front apron.

 WARNING	
	WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.
	 LOCKOUT MACHINE. Refer to Section 9.1, Safety Information for Lockout Procedure.



Figure 9f Upper Inspection Door






Each blow bar must be in contact with the lower seat engaging surfaces of the rotor when measuring the gap. If the blow bar is not in contact with the lower seat engaging surfaces, the gap **MUST be increased by 10mm (3/8”) to compensate for the lifting of the blow bars under centrifugal force**



5. Loosen the locknut with protective sleeve (A) a few turns (Figure 9g). Repeat this step for the other adjusting mechanism.
6. **To increase the gap**, between the blow bar and apron, tighten (turn clockwise) both adjusting nuts (B) (Figure 9g) in turn a little at a time and by an equal amount.
7. **To decrease the gap**, between the blow bar and apron loosen (turn anti-clockwise) both adjusting nuts (B) (Figure 9g) in turn by a little at a time and by an equal amount.



Ensure the adjusting nut (B) always sits on the guiding sleeve and disc springs (C).

 WARNING	
	WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.
	LOCKOUT MACHINE. Refer to Section 9.1, Safety Information for Lockout Procedure.

8. When the gap is correct, tighten the locknut with protection cap (A) and lock against the adjusting nut (B). Repeat this step for the other adjusting mechanism.
9. Close the inspection doors and secure with the locking clip..

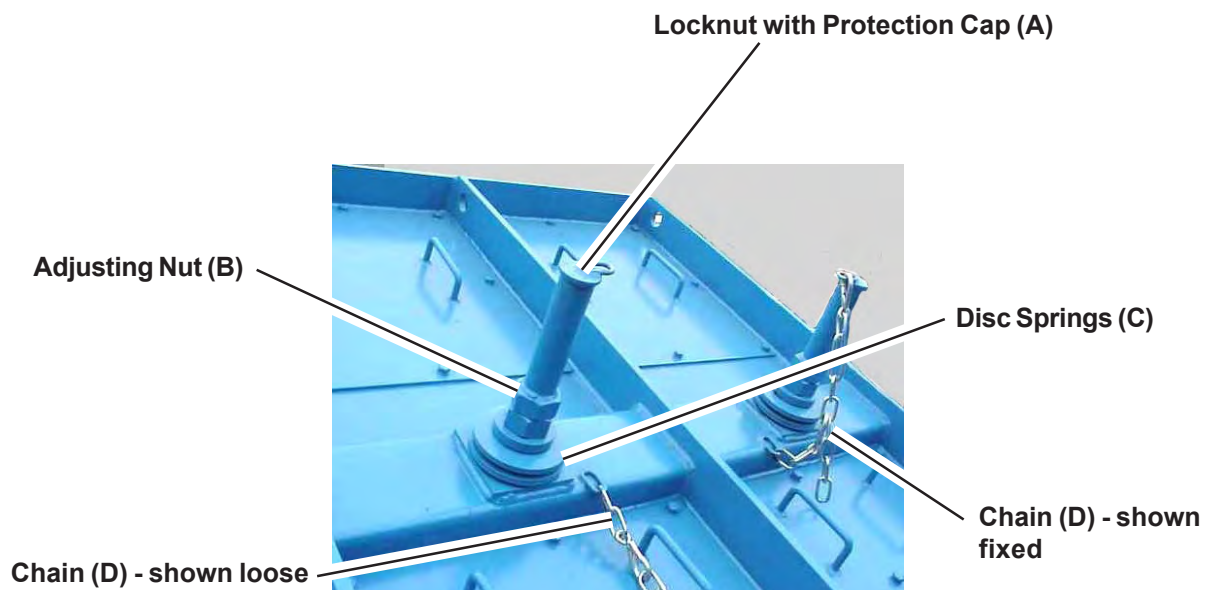





Figure 9g Front Impact Apron Adjustment



9.6.3 Adjusting the Rear Impact Apron



After any maintenance and before starting the crusher, ensure the rotor can turn without any impedance. Check the distance between the ‘long’ blow bars (Refer to Section 9.7.1) and impact plates and if necessary adjust the impact aprons and swing arm

 WARNING	
	WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.
	 LOCKOUT MACHINE. Refer to Section 9.1, Safety Information for Lockout Procedure.

See Section 3.4.1 Impactor Settings

Procedure

1. Observe all safety warnings.
2. Run the crusher until completely empty. Close down the plant (Section 8.2) and implement the lockout procedure.
3. Open the upper inspection doors on the side of the crusher (Figure 9f).
4. Measure the smallest gap between **each** blow bar and the lowest wear plate of the rear apron.



The blow bar must be in contact with the lower seat engaging surfaces of the rotor when measuring the gap. If the blow bar is not in contact with the lower seat engaging surfaces, the gap **MUST** be increased by 10 mm (3/8”) to compensate for the lifting of the blow bars under centrifugal force



5. On one of the Rear Impact Apron Adjusting mechanisms (Figure 9h) undo the set screws (A) and remove the keep plate (B). Repeat this step for the other adjusting mechanism.
6. **To increase the gap**, between the blow bar and the rear apron, tighten (turn clockwise) both adjusting sleeves (C) each in turn a little at a time and by equal amounts.
7. **To decrease the gap** between the blow bar and the rear apron, loosen (turn anti-clockwise) both adjusting sleeves (C) each in turn a little at a time and by equal amounts.

	WARNING
	WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.
	LOCKOUT MACHINE. Refer to Section 9.1, Safety Information for Lockout Procedure.

8. When the gap is correct, replace both keep plates and secure with the 2 set screws in each keep plate.
9. Close the inspection doors and secure with the locking clip.

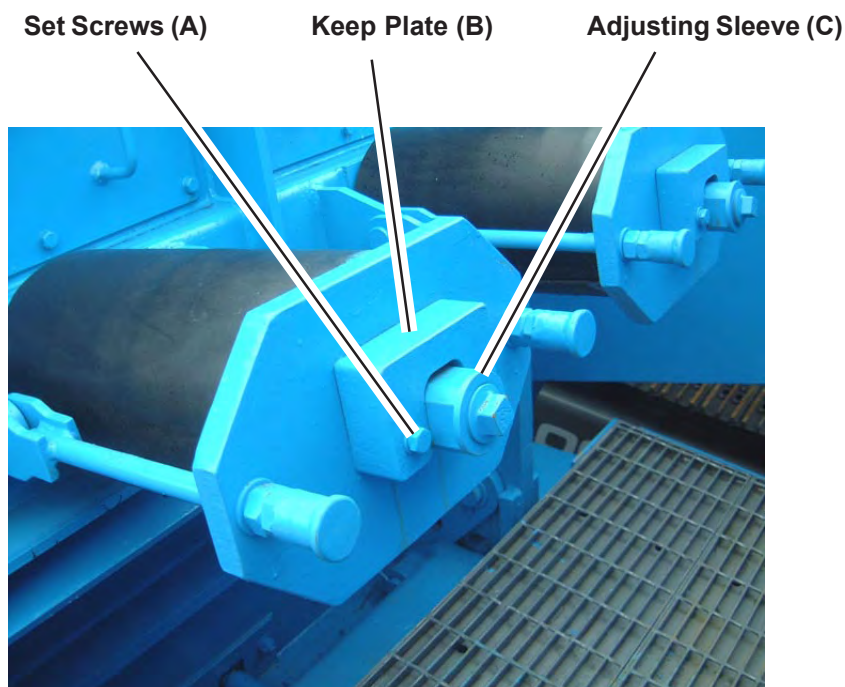


Figure 9h Rear Impact Apron Adjustment

9.6.4 Adjusting the Swing Arm (where fitted)



After any maintenance and before starting the crusher, ensure the rotor can turn without any impedance. Check the distance between the 'long' blow bars (Refer to Section 9.7.1) and impact plates and if necessary adjust the impact aprons and swing arm

 WARNING	
	WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.
	 LOCKOUT MACHINE. Refer to Section 9.1, Safety Information for Lockout Procedure.

See Section 3.4.1 Impactor Settings

Procedure

1. Observe all safety warnings.
2. Run the crusher until completely empty. Close down the plant (Section 8.2) and implement the lockout procedure.
3. Lift out the platform between the crusher and engine canopy, to increase access to the swing beam adjusting mechanism.
4. Measure the smallest gap between **each** blow bar and the swing beam rails. (Figure 9i).



Figure 9i Swing Arm and Blow bar



The blow bar must be in contact with the lower seat engaging surfaces of the rotor when measuring the gap. If the blow bar is not in contact with the lower seat engaging surfaces, the gap MUST be

increased by 10mm (3/8") to compensate for the lifting of the blow bars under centrifugal force



5. On the swing arm adjusting mechanism (similar to Figure 9h) undo the set screws (A) and remove the keep plate (B).
6. **To increase the gap**, between the blow bar and the swing arm rail, tighten (turn clockwise) the adjusting sleeve (C).
7. **To decrease the gap** between the blow bar and the swing arm rail, loosen (turn anti-clockwise) the adjusting sleeve (C).
8. When the gap is correct, replace the keep plate and secure with the 2 set screws.
9. Close the inspection doors and secure with the locking clips

	WARNING
	WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.
	LOCKOUT MACHINE. Refer to Section 9.1, Safety Information for Lockout Procedure.

9.7 Crusher - Replacement of Wear Parts

Use only genuine BL-Pegson replacement wear parts. Check daily for wear on all parts affected particularly where the material being crushed is known to be abrasive. It is important that designed replaceable wearing parts are renewed before the underlying machine is subjected to wear.

One working day after fitting new replacement wear parts always check the fixing bolts for tightness.

All maintenance on the impact crusher must only be carried out when the plant lockout procedure has been carried out and the crusher rotor is stationary.

When replacing wear parts check there is no build up of material within the crusher, eg. between the impact aprons, swing beam (if fitted) and the crusher side walls, and clear as necessary. Always make sure that the seating of a wear part is clean and the part is properly 'bedded' in position.

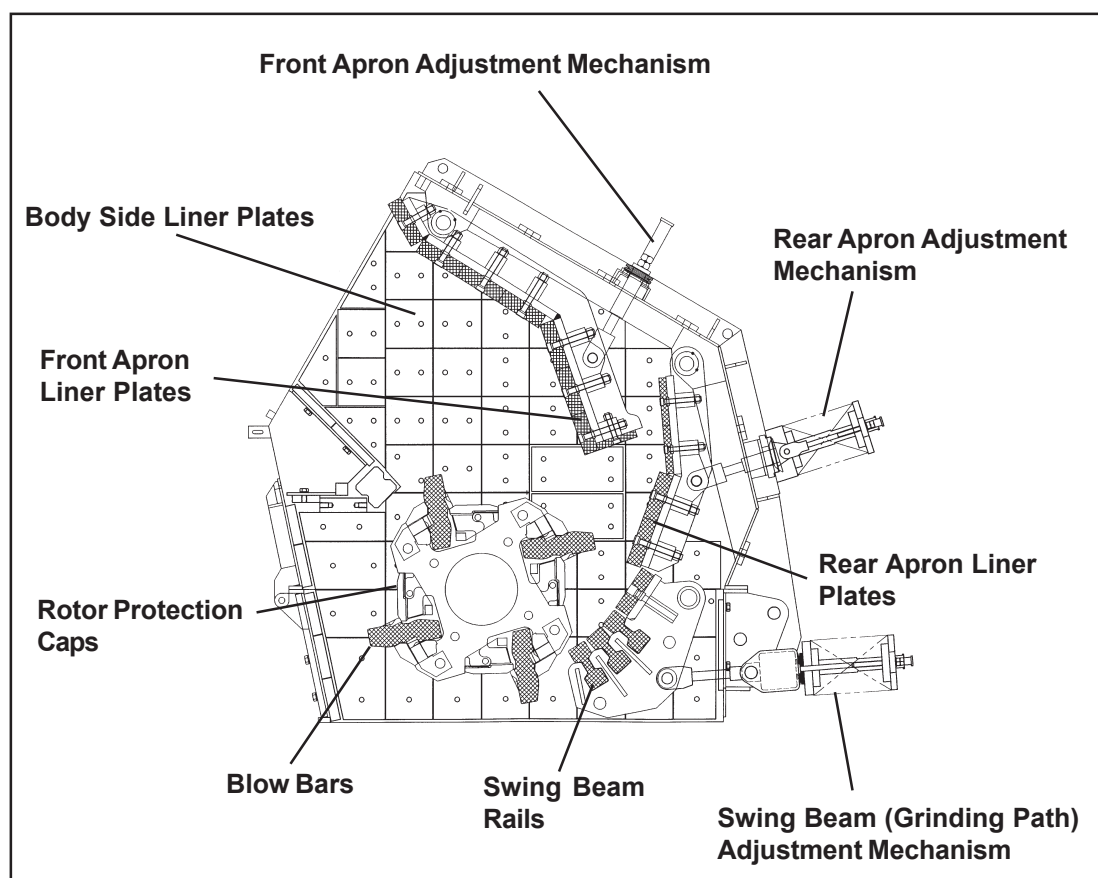


Figure 9j Impact Crusher Parts



9.7.1 Replacing worn Blow Bars






The crusher must be fitted the matched pairs of blow bars fitted diametrically opposite to each other. The maximum weight difference between the two Blow Bars supplied as a pair is 0.47 kg.

ONLY REPLACE/TURN BLOW BARS AS MATCHED OPPOSITE PAIRS TO MAINTAIN THE CORRECT ROTOR BALANCE

Of the two pairs of blow bars fitted to the rotor, one pair is shorter (ie. having a smaller projection from the rotor periphery) than the other pair.

Reverse the wearing face of a pair of blow bars through 180° when the original face is worn but maintain the one pair 'long' and one pair 'short' blow bar configuration on the rotor by fitted appropriate new blow bar when necessary.

 <h2 style="margin: 0;">WARNING</h2>	
	<p>WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.</p>
	<p>LOCKOUT MACHINE. Refer to Section 9.1, Safety Information for Lockout Procedure.</p>



Before replacing the blow bars, the impact aprons and swing beam should be set fully open. (Fully Open - maximum gap between blow bar and impact apron/swing beam).




After any maintenance and before starting the crusher, ensure the rotor can turn without any impedance. Check the distance between the 'long' blow bar and impact plates and, if necessary, adjust the impact aprons and swing arm (Section 9.6) in accordance with data set out in Sections 3.3 (Designated Use) and 3.4 (Crusher Capacity).



Removal of each Blow Bar

Procedure

1. Observe all safety warnings.
2. Run the crusher until completely empty. Close down the plant (Section 8.2) and implement the lockout procedure.
3. Open the crusher (Section 9.5.2)
4. To remove the two axial locks - remove the split pins, withdraw the securing pins and remove the axial locks. (Figure 9k). To prevent the rotor from turning whilst the blow bar is removed, **lock the rotor into position using the rotor lock (Figure 9l)** Insert the pin end of the rotor lock into the hole in the rotor just vacated by the axial lock and secure the lock to the crusher body by the adjacent swivelling eye bolt (Figure 9l & 9m).
5. Clean out the debris between the blow bar and rotor recess.
6. Using the hydraulic blow bar extraction tool provided mount the tool as shown (Figure 9m) on the drive guard side of the crusher. Using the quick release hose couplings connect to the crusher ram operating valve on the platform
7. In the same manner of operation as when opening the crusher body, push out the blow bar with the extraction tool. As the blow bar is extracted

	<h2 style="margin: 0;">WARNING</h2>
	<p>WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.</p>
	<p>LOCKOUT MACHINE. Refer to Section 9.1, Safety Information for Lockout Procedure.</p>

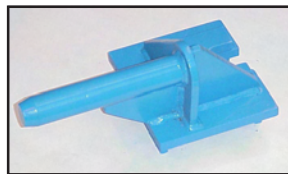
support the weight with suitable slings and lifting gear. Extension bars are included with the extraction tool to be inserted, when necessary, when the limit of travel is reached.

8. Retract the piston in the extraction tool by moving the operating lever in the reverse direction and remove the tool from the rotor.

continued on the next page.....



Figure 9k Impact Crusher - Blow Bar and Axial Lock



**Figure 9l Rotor Lock
(fit where indicated)**

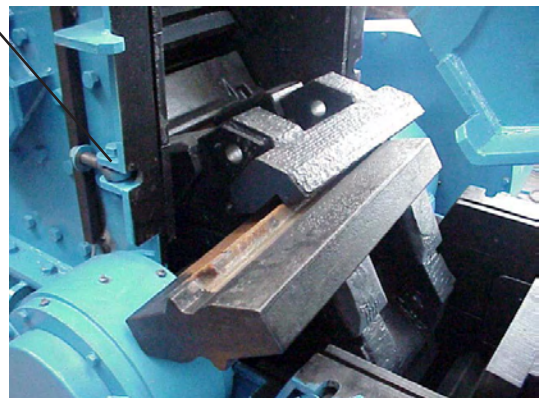
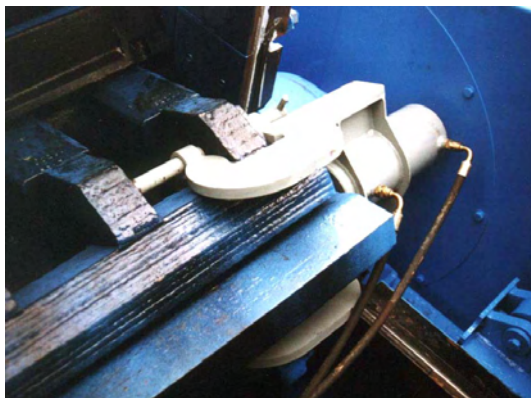


Figure 9m Removing the Blow Bar



Fitting of Blow Bars



ONLY REPLACE/TURN BLOW BARS AS MATCHED OPPOSITE PAIRS TO MAINTAIN THE CORRECT ROTOR BALANCE



Every time a blow bar is rotated or replaced, check the 4 rotor protection caps for wear and damage. If necessary replace all 4 rotor protection caps. Do not replace individual rotor protection caps. NEVER work with worn or damaged rotor protection caps.

9. Using suitable lifting equipment support the blow bar in the middle.
10. Slide the blow bar halfway into the rotor.
11. Reposition the lifting equipment and support the blow bar at its end.
12. Slide the blow bar into position.
13. Remove to rotor lock.
14. Fit the both axial locks and axial securing pins. Fit new split pins.
15. Rotate the rotor and repeat Steps 4 to 14 for the other diametrically opposite Blow Bar **MAKING SURE THAT IT IS THE OTHER BLOW BAR OF THE MATCHING PAIR.**

	WARNING
	WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.
	LOCKOUT MACHINE. Refer to Section 9.1, Safety Information for Lockout Procedure.



After any maintenance and before starting the crusher, ensure the rotor can turn without any impedance.

- 16.** Close the crusher (Section 9.5.2).
- 17.** Check the distance between the ‘long’ blow bars and impact plates and if necessary adjust the impact aprons and swing arm (Section 9.6).
- 18.** When the blow bar changing process is complete disconnect the extraction tool and reconnect the crusher door ram hoses to the valve unit on the platform.



Run the crusher empty for 30 minutes to allow the blow bars to bed into position and also check that the crusher is running smoothly.



Never open the inspection doors while the crusher is in operation.



WARNING



WEAR PERSONAL PROTECTIVE EQUIPMENT.
Refer to Section 9.1, Safety Information for relevant warning.



LOCKOUT MACHINE.
Refer to Section 9.1, Safety Information for Lockout Procedure.



9.7.2 Replacing the Impact Plates of the **Front** and **Rear** Impact Aprons

Procedure

1. Observe all the safety warnings.
2. Run the crusher until completely empty. Close down the plant (Section 8.2) and implement the lockout procedure.
3. Remove the appropriate access panels (Figures 9o & 9p) on the outside of the crusher using suitable lifting equipment.
4. Open the crusher (Section 9.5.2).
5. Remove the worn impact plates.
6. Clean the seats of the impact plates.
7. Fit new impact plates. Strike the bolt heads repeatedly during tightening to ensure the bolts are seated correctly in the bores of the of impact plates. To help prevent the special countersunk bolts from turning when the nuts are tightened, a suitable chisel or screw driver can be pushed between the bore and the bevelled part of the bolts head.
8. Tighten the nuts to the specified torque (Figure 9n).



NOTICE

Only use NEW Philidas locking nuts when fitting new liner plates.



WARNING



WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.



LOCKOUT MACHINE. Refer to Section 9.1, Safety Information for Lockout Procedure.

9. Close the crusher (Section 9.5.3).
10. Refit the access panels.
11. Check the distance between the blow bars and impact plates and if necessary adjust the impact aprons and swing beam (Section 9.6).



WARNING

After any maintenance and before starting the crusher, ensure the rotor can turn without any impedance.

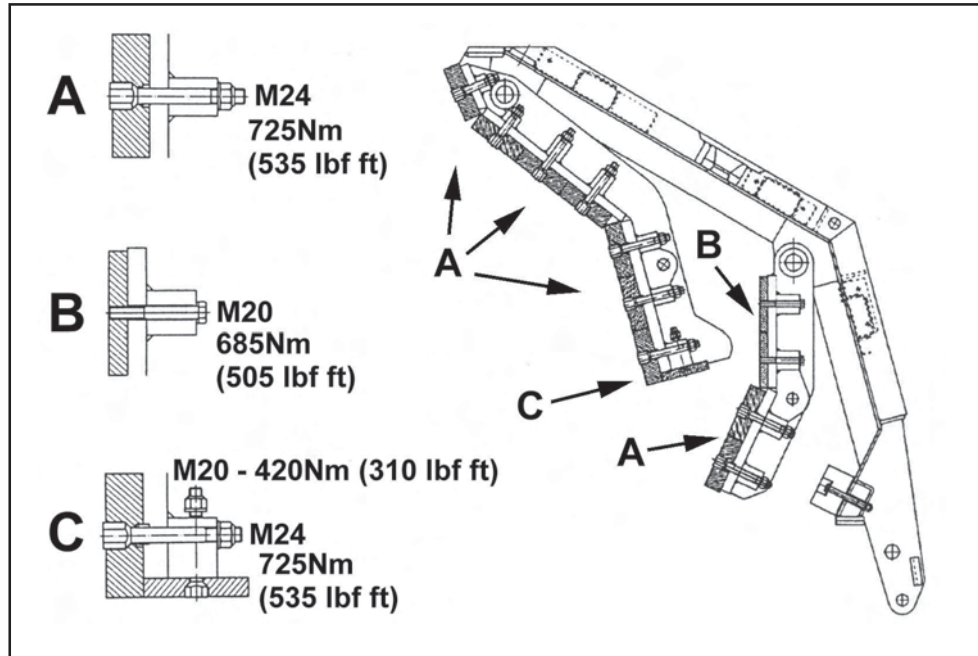


Figure 9n Front & Rear Impact Plate Bolts - Tightening Torques

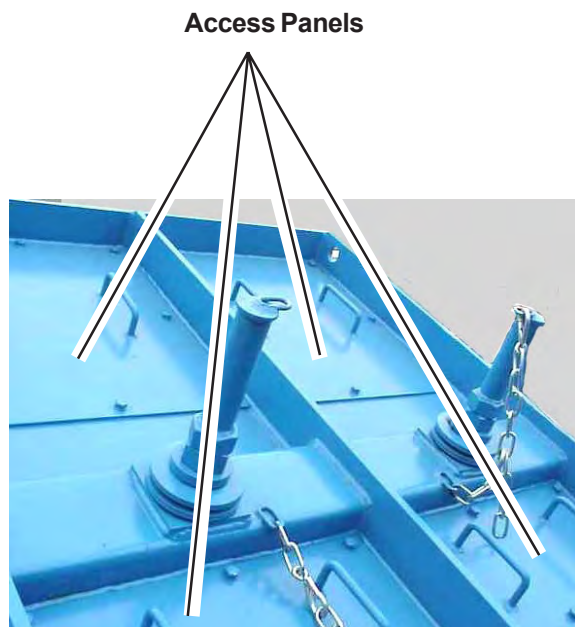


Figure 9o Front Impact Apron Access Panels and Wear Plates



Wear Plates

Access Panels



Figure 9p Rear Impact Apron Access Panels and Wear Plates





9.7.3 Replacing the Side Wall Liner Plates

Procedure

1. Observe all the safety warnings.
2. Run the crusher until completely empty. Close down the plant (Section 8.2) and implement the lockout procedure.
3. Open the crusher (Section 9.5.1)
4. Remove one of the axial locks from the top Blow Bar. (Figure 9k)
5. Secure the rotor lock into the place where the axial lock seats and bolt the rotor lock to the side of the crusher body. (Figure 9l & 9m)
6. Clean out any debris from the liner plates.
7. All the side wall liner plates are bolted into position from the outside of the crusher. To remove/replace any of the side wall liner plates, support the liner from the inside of the crusher whilst removing/fitting the bolt.

Side Liner Tightening Torque
420Nm (310lbf ft).

 WARNING	
	WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.
	 LOCKOUT MACHINE. Refer to Section 9.1, Safety Information for Lockout Procedure.



In the main wear area, the liner plates can be rotated or interchanged to achieve optimal utilisation of the liner plates.



The bottom inlet beam is located on two side wall liner plates A6984/9/2 (Figure 9r). DO NOT attempt to remove the side wall liner plates A6984/9/2, without first removing the bottom inlet beam A6984/9/23 (Section 10)

9.7.4 Replacing the Bottom Inlet Beam




Removal of the Bottom Inlet Beam

Procedure

1. Observe all the safety warnings.
2. Run the crusher until completely empty. Close down the plant (Section 8.2) and implement the lockout procedure.
3. Remove the rubber panels on either side of the crusher.
4. Undo the three bolt protection caps on the front access door.
5. Loosen the three toggle bolts and rotate them through 180°.
6. Using suitable lifting equipment support the front access door.
7. Standing clear of the access door, prise open the door, using the lifting equipment to take the weight of the door. Lower the door until it is fully open.



DO NOT enter the area between the front access door of the crusher and the crusher feed chute whilst opening/closing the access door.

 WARNING	
	WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.
	 LOCKOUT MACHINE. Refer to Section 9.1, Safety Information for Lockout Procedure.



8. Remove the lifting equipment.
9. Screw two M20 eye bolts into the two tapped holes of the bottom inlet beam.
10. Using suitable lifting equipment lift out the beam using the eye bolts.




Fitment of the Bottom Inlet Beam

11. Screw two M20 eye bolts into the two tapped holes of the new bottom inlet beam.
12. Using suitable lifting equipment position the beam onto the two side wall liner plates and slide the beam into position.
13. Using suitable lifting equipment, close the access door.



DO NOT enter the area between the front access door of the crusher and the crusher feed chute whilst opening/closing the access door.

14. Rotate the three toggle bolts through 180° and fully tighten.
15. Refit the three bolt protection caps.

 WARNING	
	WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.
	LOCKOUT MACHINE. Refer to Section 9.1, Safety Information for Lockout Procedure.



9.7.5 Replacing the Retractable Beam

Removal of Retractable Beam

Procedure

1. Observe all the safety warnings.
2. Run the crusher until completely empty. Close down the plant (Section 8.2) and implement the lockout procedure.
3. Remove the retractable beam access covers on either side of the crusher (Figure 9q).
4. Using a heavy hammer or beetle, drive out the retractable beam, supporting the beam with suitable lifting equipment.



When driving out the retractable beam splinters may be produced. Where protective clothing and safety glasses.



To aid removal of the beam the front wall can be opened (Figure 9s). A cantilever bar can then be used to assist with the driving out procedure.



WARNING



WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.



LOCKOUT MACHINE. Refer to Section 9.1, Safety Information for Lockout Procedure.



Figure 9q Access Cover - Retractable Beam

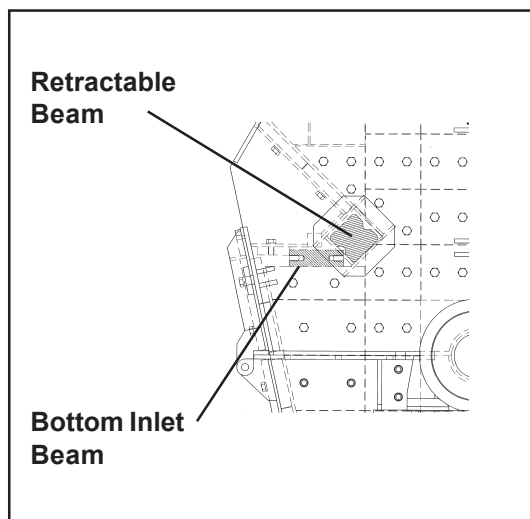


Figure 9r Retractable Beam Detail



Figure 9s Front Wall Open

Fitting of Retractable Beam



The retractable beam can be rotated through 180° if the v-grooves are in good condition. **DO NOT** rotate the beam if the v-grooves are worn.



Whenever the retractable beam is rotated or replaced, the bottom intake armouring should be checked and replaced if necessary.

5. Using suitable lifting equipment support the beam.
6. Using a hammer or beetle drive the beam into position.






When driving in the retractable beam splinters may be produced. Wear protective clothing and safety glasses.

7. Close the front wall of the machine.
8. Replace the retractable beam covers on either side of the crusher.



After any maintenance and before starting the crusher, ensure the rotor can turn without any impedance.

	<h2>WARNING</h2>
	<p>WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.</p>
	<p>LOCKOUT MACHINE. Refer to Section 9.1, Safety Information for Lockout Procedure.</p>

9.8 Feeder - Operation

The vibrating feeder must, in addition to the scheduled lubrication requirements (Section 9.4), be regularly inspected for any wear, damage or breakage with the mainframe and support springs being paid particular attention. Rectify faults immediately.

After first 8 hours of operation, change the oil in the vibrating unit end covers.

Drive side-approx. 2.1 litres (4.5 US pints)
Non-drive side-approx. 1.7 litres (3.5 US pints).

Make sure that the feeder can vibrate freely without fouling against the adjacent hopper or chutework and that hardened material inside the pan is not allowed to build up and affect the performance of the machine. Also check to ensure that the hydraulic drive is operating efficiently. The variable speed control is situated on the Feeder/Conveyor control box.

Periodically check the condition of the blanking mat or mesh panel beneath the grizzly bars for both wear and build up of material and rectify if necessary.

The plant is supplied with the feeder fitted with a blanking mat; all the material passing through the grizzly bars will bypass the crusher and discharge onto the product conveyor.

	<h2>WARNING</h2>
	WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.
	LOCKOUT PLANT. Refer to Section 9.1, Safety Information for Lockout Procedure.
	FALLING HAZARD. Refer to Section 9.1, Safety Information for relevant warning.

If a wire mesh underscreen is fitted (an alternative option to the blanking mat) the material rejected will bypass the crusher whilst the material passing through the mesh will discharge onto the dirt conveyor.

A two-way hand operated flap door can be positioned so that a portion of the undersize can be directed to the bypass chute.

Frequently check the oil levels in the vibrating unit end covers (Figure 7i).

9.8.1 Removing the Underscreen Mesh or Blanking Mat

The plant feeder can be fitted with wire underscreen to discharge material to the dirt conveyor or may initially be fitted with a blanking mat which directs all material passing through the grizzly bars on to the on-plant product conveyor. If required to alter the configuration either to change from one to the other or to remove altogether, follow the procedure below.

Procedure

1. Observe all safety warnings.
2. Run the plant until the feeder and crusher are completely empty. Close down the plant (Section 8.2) and implement the Lockout Procedure.
3. Lower the mesh access panel at the rear of the dirt chute (Figure 9t).
4. Slacken the 2 clamping screws located in the slots each side of the feeder (Figure 9u).
5. Loosen the locking nuts on the 3 screws located underneath the feeder sufficiently to disengage the hooked ends of the panel.
6. With the hooked rod tool provided, reach through the grizzly bars from above to lift and slide the panel out.

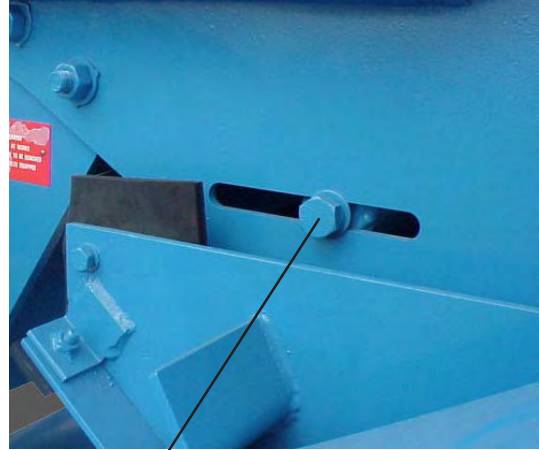
	WARNING
	WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.
	LOCKOUT PLANT. Refer to Section 9.1, Safety Information for Lockout Procedure.
	FALLING HAZARD. Refer to Section 9.1, Safety Information for relevant warning.



Figure 9t Mesh/Mat Access Panel



7. When replacing a panel carry out the procedure in reverse order making sure that the panel is sufficiently tensioned **but take care not to over tighten** otherwise the panel may be damaged.



Clamping Screw

Figure 9u Feeder Clamping Screw

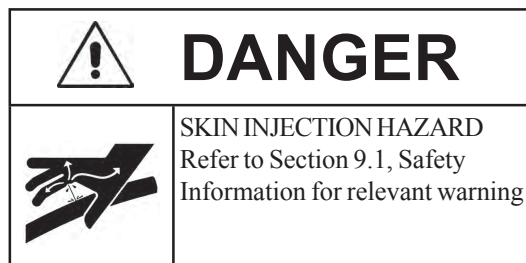
9.9 Plant - Hydraulic System Description

(Figure 9v & Hydraulic circuit diagram in Section 10)

9.9.1 General Description

All hydraulic functions are powered by two pumps, one mounted either side of the diesel engine and driven from the main crankshaft pulley via two SPB belts.

Each pump is an axial piston variable displacement unit capable of up to 95 litres/min. at 320 bar and each feeds a directional control valve.



The flows and pressures to each service is limited by the relevant spool as shown below and the pump supplies only the required flow by automatically backing off the swash plate angle thus reducing wasted power and resulting heat generation.

Front Pump			
Service	Spool Type	Max Flow Litres/min (US galls/min)	Max Pressure (Bar)
L/H track drive motor	Proportional	65 (17)	320
Product conveyor plus Magnet and Water Pump (when fitted)	On/Off	100 (26.4)	210
Rear Pump			
Service	Spool Type	Max Flow Litres/min (US galls/min)	Max Pressure (Bar)
R/H track drive motor	Proportional	65 (17)	320
Feeder	Proportional	0 - 65 (17)	180
Dirt Conveyor	On/Off	25 (6.5)	180
Dirt Conveyor Fold	On/Off	25 (6.5)	100

22/10/04

Figure 9v Front/Rear Hydraulic Pumps



This is achieved by means of a load sensing line from the valve to the pump which measures the pressure required which is then matched by the pump.

Note:-

All relief valve pressures are factory set and should not be adjusted on site.

Although the maximum flows from each spool is limited as shown, these can be individually adjusted downwards by means of limit screws if desired. Please contact BL-Pegson Ltd.

9.9.2 Track Drives

Although these valves Sections have proportional controls and are theoretically infinitely variable they are electrically limited to two speeds for simplicity.

- a) SLOW - For slewing and fine positioning.
- b) FAST - For straight line running, forward or reverse.

Note:- The maximum power take off from one side of the engine is limited to approximately 30 kW, therefore the system is electronically limited such it is only possible to slew (operate one side only) when in the 'SLOW' mode.

Fine adjustment of the slow speeds is possible. Consult BL-Pegson Ltd.

It is recommended that adjustment is not undertaken without BL-Pegson Ltd. consent and under no circumstances should the slow speed be adjusted greater than 0.4kph (0.2mph).

Motor mounted motion control valves are utilised to prevent the machine over running when moving downhill.

This block also incorporates a shuttle valve to release the spring applied track parking brake together with a pressure reducing valve, pre set to 60 bar so that the brakes are not overpressurised.

9.9.3 Feeder Drive

This valve Section is fitted with a proportional solenoid so that the feeder speed can be controlled by means of a chassis mounted control box potentiometer.

9.9.4 Circuit Protection

The system is equipped with the following protection:-

- Suction Filter (90 μ m nominal)
- Pressure Filter (10 μ m absolute) in each pump circuit prior to the directional control valves.
- Return Filter (10 μ m nominal)
- Low oil level cut out.



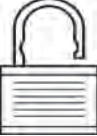
Note:- For Hydraulic Pump Drive Belt adjustment refer to Section 9.11.4.

9.9.5 Changing the Suction Filter

Located at the base of the hydraulic reservoir tank is the hydraulic suction filter. When the dial gauge needle (Figure 9w) enters into the red segment **whilst the system is running at normal operating temperature** this is an indication that the filter must be replaced immediately. The filter housing has an internal shut off valve to permit work on the system. **Make sure the oil has cooled before changing.**

Procedure

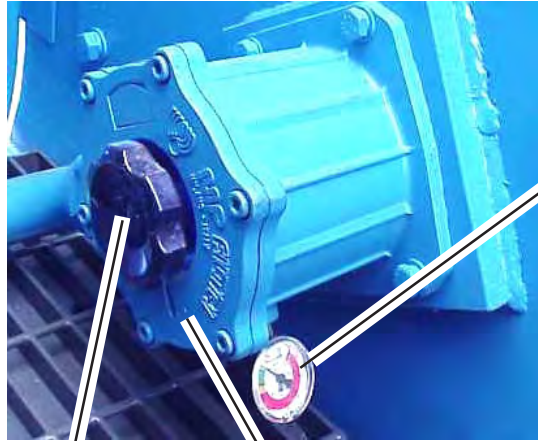
1. Observe all safety warnings.
2. Close down the plant (Section 8.2) and implement the Lockout Procedure.
3. Unscrew the black plastic knob in the centre of the filter housing anticlockwise until it reaches the stop (Figure 9w).
4. Take steps to collect spillage of oil (approx. 2 litres / 1/2 US gall) before undoing the six socket head screws on the front of the housing to remove the cover plate.
5. Remove the old filter and clean inside the housing with lint free cloth before fitting a new filter of the approved pattern and specification.
6. Before replacing the cover plate, lightly oil the 'O' ring and make sure it is properly seated in the groove. Replace the cover plate and refit the screws to ensure an oil tight seal.

	DANGER
	SKIN INJECTION HAZARD Refer to Section 9.1, Safety Information for relevant warning
	WARNING
	WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.
	LOCKOUT MACHINE. Refer to Section 9.1, Safety Information for Lockout Procedure.

7. Fully screw in the bolt A in the centre of the filter housing.



It is important to ensure that the black knob is fully screwed in before restarting the plant. Damage will occur to the plant if this procedure is not followed.



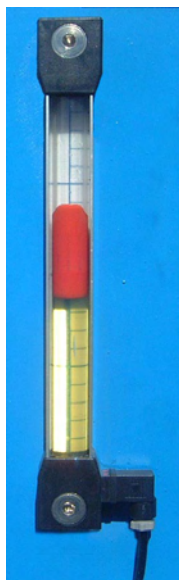
Filter Condition Indicator Dial



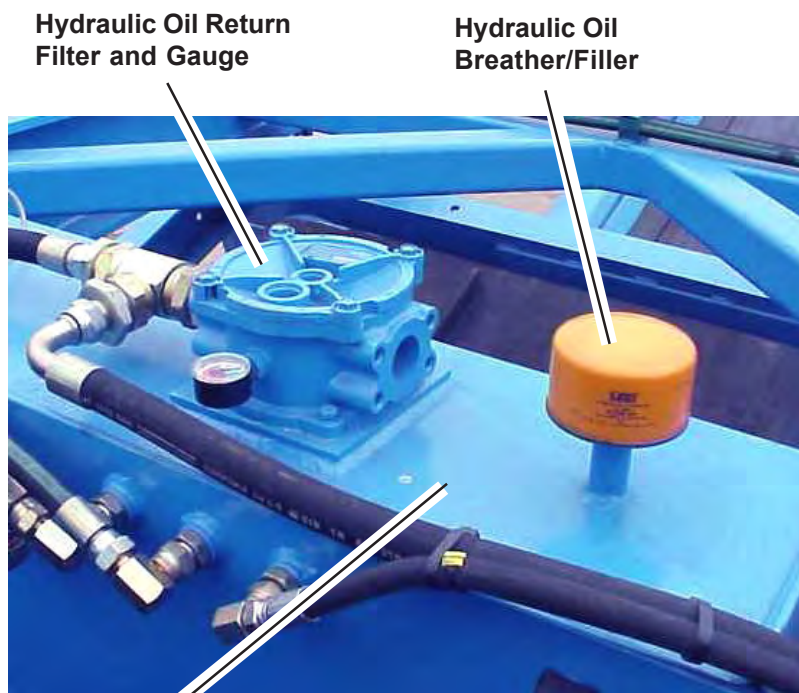
It is important to ensure that the black knob is fully screwed in before restarting the plant. Damage will occur to the plant if this procedure is not followed.

Black Knob

Removable Cover Plate



Hydraulic Oil Level



Hydraulic Oil Return
Filter and Gauge

Hydraulic Oil
Breather/Filler

Hydraulic Oil Tank

Figure 9w Suction Filter, Hydraulic Oil Tank & Level Indicator





9.9.6 Changing the Return Filter

Located on top of the hydraulic reservoir tank is the hydraulic return filter. When the dial gauge needle (Figure 9w) enters into the red segment **whilst the system is running at normal operating temperature** this is an indication that the filter must be replaced immediately. **Make sure the oil has cooled before changing.**

In the event hydraulic oil needs to be added to maintain the correct level on the gauge (Figure 9w), this should be poured in after removing the cover (see below) but with the filter element left in place. Check the system for leaks if topping up becomes necessary.

Procedure

1. Observe all safety warnings.
2. Close down the machine (Section 8.2) and implement the Lockout Procedure.
3. Remove the four hexagon head screws on the top of the housing to remove the cover plate together with internal spring.
4. Remove the old filter and clean inside the housing with lint free cloth before fitting a new filter of the approved pattern and specification. Replace the spring which holds the filter in place
5. Before replacing the cover plate, lightly oil the 'O' ring and make sure it is properly seated in the filter housing. Replace the cover plate and refit the screws to ensure an oil tight seal.

	DANGER
	SKIN INJECTION HAZARD Refer to Section 9.1, Safety Information for relevant warning
	WARNING
	WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.
	LOCKOUT PLANT. Refer to Section 9.1, Safety Information for Lockout Procedure.
	FALLING HAZARD. Refer to Section 9.1, Safety Information for relevant warning.

9.9.7 Changing the Tank Breather

The breather should be changed after the first 100 hours of operating and thereafter after 500 hours but in dusty atmosphere it is recommended to change more frequently depending upon conditions. Simply unscrew and replace whilst the plant is shut down (Section 8.2).






		DANGER
	SKIN INJECTION HAZARD Refer to Section 9.1, Safety Information for relevant warning	
		WARNING
	WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.	
	LOCKOUT PLANT. Refer to Section 9.1, Safety Information for Lockout Procedure.	
	FALLING HAZARD. Refer to Section 9.1, Safety Information for relevant warning.	

9.9.8 Changing the Pressure Filters

Located on each side on the engine within the canopy are the hydraulic pressure filters. When the 'telltale' (Figure 9x) changes from green to red **whilst the system is running at normal operating temperature** this is an indication that the filter must be replaced immediately. **Make sure the oil has cooled before changing.**

Procedure

1. Observe all safety warnings.
2. Close down the machine (Section 8.2) and implement the Lockout Procedure.
3. Unscrew (turn anticlockwise looking from below) the filter bowl using the hexagon 'nut' cast into the base. Take steps to contain spillage of oil
4. Remove the old filter and clean inside the bowl and housing with lint free cloth before fitting into position a new filter and small 'O' ring of the approved pattern and specification.
5. Before replacing the bowl, lightly oil the 'O' ring and place on it's seating in the bowl making sure it is properly seated. Screw the bowl into the housing taking care not to 'cross' the threads when doing so. Tighten with the 'nut' at the base of the bowl to ensure an oil tight seal.

	DANGER
	SKIN INJECTION HAZARD Refer to Section 9.1, Safety Information for relevant warning
	WARNING
	WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.
	LOCKOUT PLANT. Refer to Section 9.1, Safety Information for Lockout Procedure.

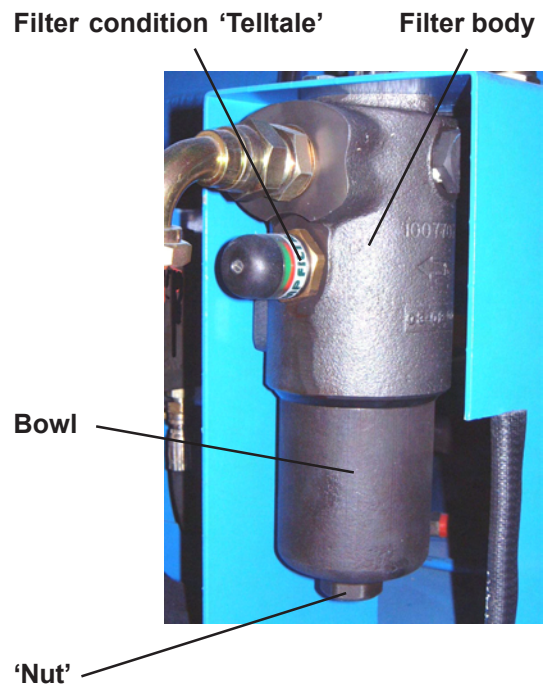


Figure 9x Pressure Filter

9.10 Plant - Electrical System Description

For the electrical circuit diagram see Appendix Section of the manual

Electrical power of DC24 volt for the electrical equipment on the plant is derived from the diesel engine to operate the control systems for the crusher and all the plant items.

The electrical system on the Trakpactor provides protection against incorrect operation, such as low oil level in the hydraulic tank cutting out the motor. In addition to this, parts of the hydraulic system are controlled by electrical contacts operating solenoid valves.

The plant is fitted with Emergency Stop buttons (Sections 1.7 and 8.3) and, in addition, is equipped with a comprehensive range of protection devices to safeguard the equipment against damage. Should any of the sensing equipment fail in operation, the necessary repairs or replacement should be made immediately. This will restore the safeguard to keep the equipment from harm and maintain any warranty in force for the time being. No attempt should be made to circumvent these protection devices.

	<h2 style="margin: 0;">WARNING</h2>
	<p>WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.</p>
	<p>LOCKOUT MACHINE. Refer to Section 9.1, Safety Information for Lockout Procedure.</p>

9.11 Plant - Crusher and Hydraulic Pump Drive Belts

Good alignment of both pulleys is important otherwise the belt flanks will wear quickly. Ensure axis are parallel when viewed from all planes (Figure 9z).

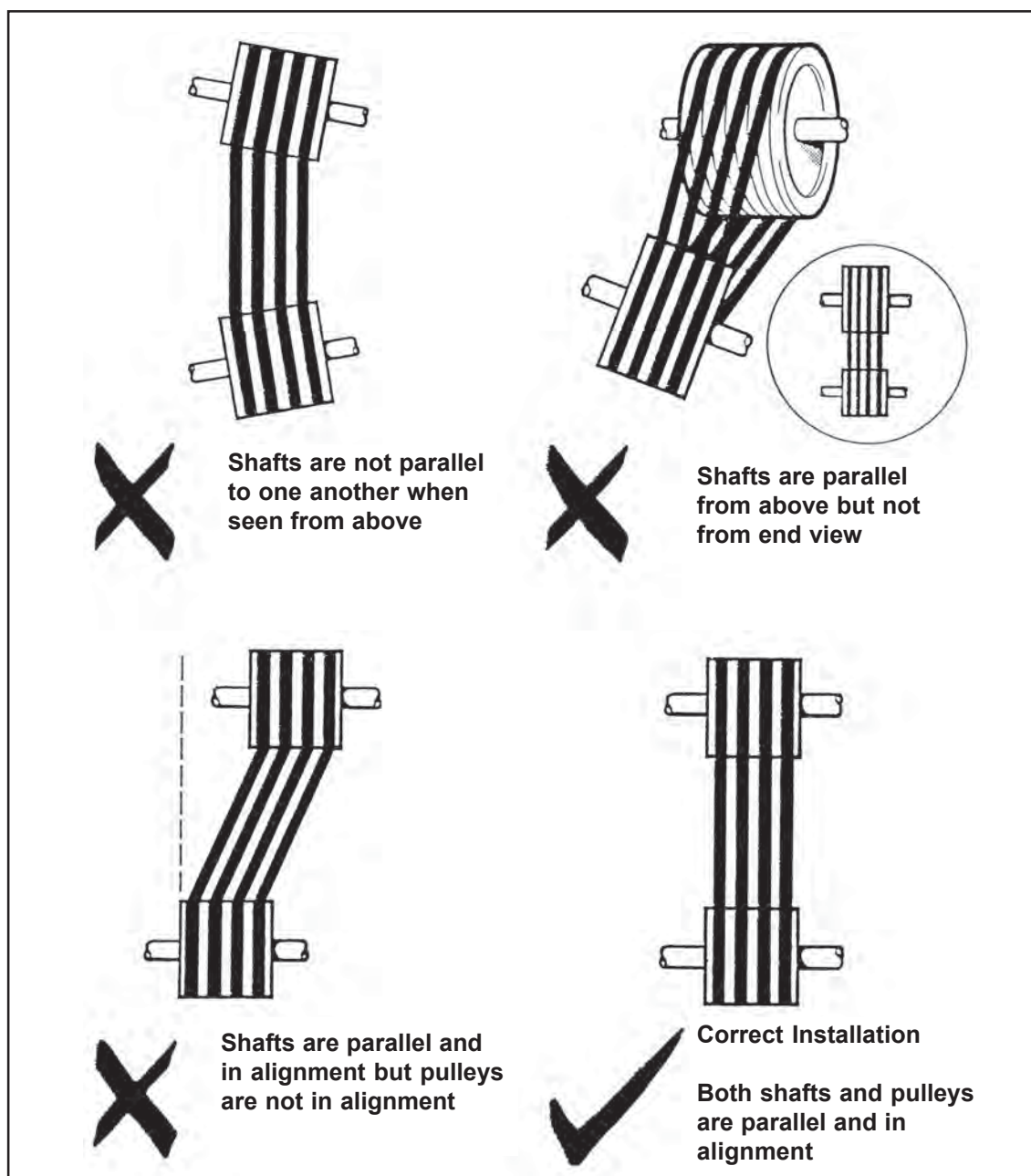


Figure 9z Correct Alignment of Pulley Belts



9.11.1 Replacement of Crusher Drive Belts

Note: Drive belts should be inspected regularly for wear and also to monitor any pattern in the wear if it is occurring (Figure 9z).

Procedure

1. Observe all safety warnings.
2. Close down the plant (Section 8.2) and implement the Lockout Procedure.
3. Open the hinged ends of the crusher drive guard and also the underside panel by removing the securing hex. hd. set screws. (captive nuts inside guard).
4. On the engine base frame, loosen nuts A (Figure 9aa) - 4 off
5. Unscrew nut B a few turns. Repeat this step for the other adjusting screw, turning the nut an equivalent amount.
6. Tighten nut C. Repeat this step for the other adjusting screw.
7. Slacken the belts until it is possible to remove the belts without the need to stretch them (Section 9.11.2).
8. Remove the belts.
9. Reposition the new belts in place by threading through the guard, utilising the underside access to assist this process.
10. Tighten and tension the belts to the correct specification (Section 9.11.2) ensuring the engine pulley is in correct alignment with the crusher pulley (Figure 9z).
11. Ensure the crusher drive guarding is fully replaced and secured before start-up.



WARNING



WEAR PERSONAL PROTECTIVE EQUIPMENT.
Refer to Section 9.1, Safety Information for relevant warning.



LOCKOUT MACHINE.
Refer to Section 9.1, Safety Information for Lockout Procedure.



9.11.2 Adjustment of Crusher Drive Belts

The tension of the crusher drive belts is adjusted with the two screws one located on either side of the engine sliding base (Figure 9aa).

Slackening of Drive Belts

Procedure

1. Observe all safety warnings.
2. Close down the plant(Section 8.2) and implement the Lockout Procedure.
3. Open the crusher drive guard panels as necessary to gain access to the vee belt drive. (refer to Section 9.11.1 step 3)
4. Loosen nuts (A) (4 off) Figure 9aa.
5. Unscrew nut (B) a few turns. Repeat this step for the other adjusting screw, turning the nut an equivalent amount.
6. Tighten nut (C). Repeat this step for the other adjusting screw.
7. **If the belts are to be removed,** repeat Steps 5 and 6 to further slacken the belts until it is possible to remove the belts without the need to stretch them.



WARNING



WEAR PERSONAL PROTECTIVE EQUIPMENT.
Refer to Section 9.1, Safety Information for relevant warning.



LOCKOUT MACHINE.
Refer to Section 9.1, Safety Information for Lockout Procedure.



If the tension is being adjusted, repeat Steps 5 and 6 to further slacken the belts, ensuring the engine pulley is in correct alignment with the crusher pulley (Figure 9z).

When the belts have reached the correct tension (Figure 9ae, Section 19.11.5), tighten nuts (A) 4 off.

8. Ensure the crusher drive guarding is fully replaced and secured before start-up.

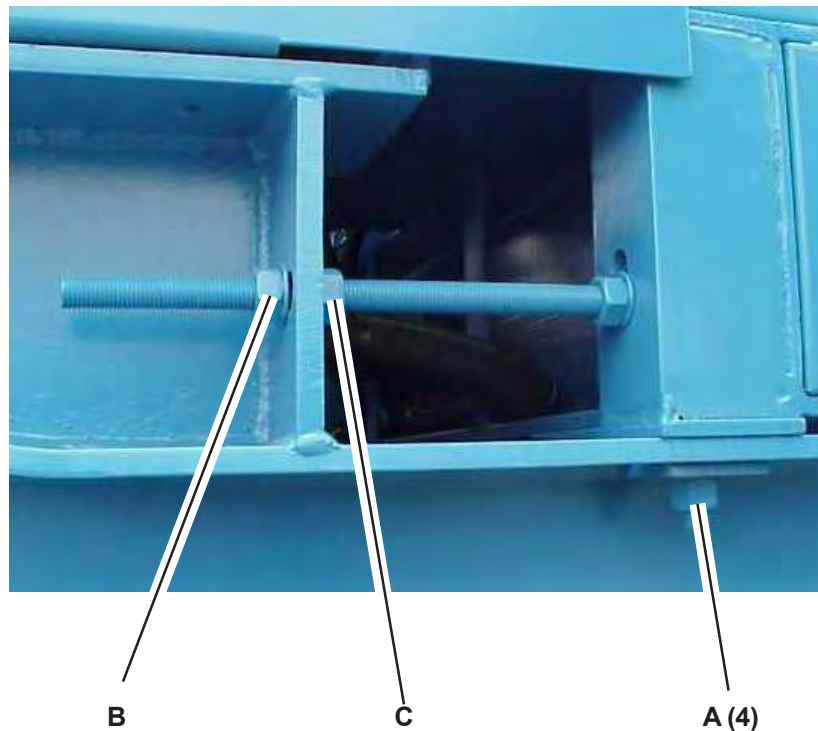





Figure 9aa Crusher Drive Belt Tensioning Mechanism LH Side

Tightening of the Drive Belts

Procedure

1. Observe all safety warnings.
2. Close down the plant(Section 8.2) and implement the Lockout Procedure.
3. Open the access panels from the crusher drive and flywheel guard as necessary. To gain access to the vee belt drive (refer to Section 9.11.1 step 3)
4. Loosen nuts (A) (4 off) Figure 9aa.
5. Unscrew nut (C) a few turns. Repeat this step for the other adjusting screw, turning the nut an equivalent amount.
6. Tighten nut (B). Repeat this step for the other adjusting screw.
7. Repeat steps 5 and 6 to further tighten the belts, ensuring the engine pulley is in correct alignment with the crusher flywheel (Figure 9z).
8. When the belt has reached the correct tension (Figure 9ae, Section 9.11.5), tighten nuts (A) 4 off.
9. When the belt has reached the correct tension (Figure 9ae, Section 9.11.5), tighten nuts (A) 4 off.
10. Ensure the crusher drive guarding is replaced and secured before start-up.

 <h2 style="margin: 0;">WARNING</h2>	
	<p>WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.</p>
	<p>LOCKOUT MACHINE. Refer to Section 9.1, Safety Information for Lockout Procedure.</p>

Deflection Dimension (mm)	Pulley Size (pcd) mm (ins)	Basic Setting Force kgf (lbf)	1.25 Setting Force kgf (lbf)
See Section 9.11.5 (Step 3)	224 (8.82")	7.1 (15.62)	8.9 (19.58)
	280 (11.02")	9.4 (20.68)	12.0 (26.40)

27/11/03

Figure 9ab Crusher Pulley Belt Tensioning Specifications



9.11.3 Changing the engine pulley

When changing the plant crushing application from recycling duties to quarry operation or vice versa, the engine pulley needs to be changed to alter the crusher speed.




Plant are supplied with an engine pulley sized to suit each type of crushing application, one fitted and one loose

Before commencing a new crushing operation check if it necessary to change the pulley. This can most easily be done by measuring the size of the loose pulley. Refer to Section 4.2.1 for the appropriate pulley size for each type of crushing operation.

Under no circumstances fit pulleys of a different size unless authorised by BL-Pegson Limited.

Procedure

1. Observe all safety warnings
2. Close down the plant (Section 8.2) and implement the lockout procedure.
3. Slacken the crusher drive belts (Section 9.11.2)
4. Change over the engine pulley keeping the taper locking bush on the engine shaft. Ensure that the new pulley is in the same alignment as the original pulley (Figure 9z) and firmly secure with the taper locking socket screws.

	<h2 style="margin: 0;">WARNING</h2>
	<p>WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.</p>
	<p>LOCKOUT MACHINE. Refer to Section 9.1, Safety Information for Lockout Procedure.</p>

5. Tighten the crusher drive belts (Section 9.11.2)

9.11.4 Replacement and Adjustment of Hydraulic Pump Drive Belts

Note:- Drive belts should be inspected regularly for wear, correct tension and contamination.






The tension of the hydraulic pump drive belts is adjusted by two bolts located beneath the hydraulic pump.

Replacement of Drive Belts

(Figures 9ac & 9ad)

Procedure

1. Observe all safety warnings.
2. Close down the plant (Section 8.2) and implement the Lockout Procedure.
3. Remove the diesel engine access covers.
4. Loosen the 4 bolts (A) securing the pump bracket to the pump stool.
5. Turn the 2 adjusting screws (B) clockwise to slacken the two drive belts. Continue until it is possible to remove the belts.
6. Remove the two drive belts and refit with new belts.
7. Turn the 2 adjusting screws anticlockwise to tighten the two drive

	DANGER
	SKIN INJECTION HAZARD Refer to Section 9.1, Safety Information for relevant warning
	WARNING
	WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.
	LOCKOUT MACHINE. Refer to Section 9.1, Safety Information for Lockout Procedure.

belts. Continue until the belts have reached the correct tension (Figure 9ae, Section 9.11.5), making sure the pump pulley is aligned with the drive pulley.

8. Tighten the 4 bolts (A) to lock the pump bracket to the pump stool.
9. Replace the diesel engine access covers before start-up.



Adjustment of Drive Belts





(Figures 9ac & 9ad)

Procedure

1. Observe all safety warnings.
2. Close down the plant (Section 8.2) and implement the Lockout Procedure.
3. Remove the diesel engine side access covers.
4. Loosen the 4 bolts (A) securing the pump bracket to the pump stool.
5. **If the drive belts need to be slackened**, turn the 2 adjusting screws (B) clockwise. Continue to turn the adjusting screws equal amounts until the drive belts have reached the correct tension (Figure 9ae, Section 9.11.4), making sure the pump pulley is aligned with the drive pulley.

If the drive belts need to be tightened, turn the 2 adjusting screws (B) anticlockwise. Continue to turn the adjusting screws equal amounts until the drive belts have reached the correct tension (Figure 9ae, Section 9.11.5), making sure the pump pulley is aligned with the drive pulley.

6. Tighten the 4 bolts (A) to lock the pump bracket to the pump stool.

	DANGER
	SKIN INJECTION HAZARD Refer to Section 9.1, Safety Information for relevant warning
	WARNING
	WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.
	LOCKOUT MACHINE. Refer to Section 9.1, Safety Information for Lockout Procedure.

7. Replace the diesel engine side access covers before start-up.

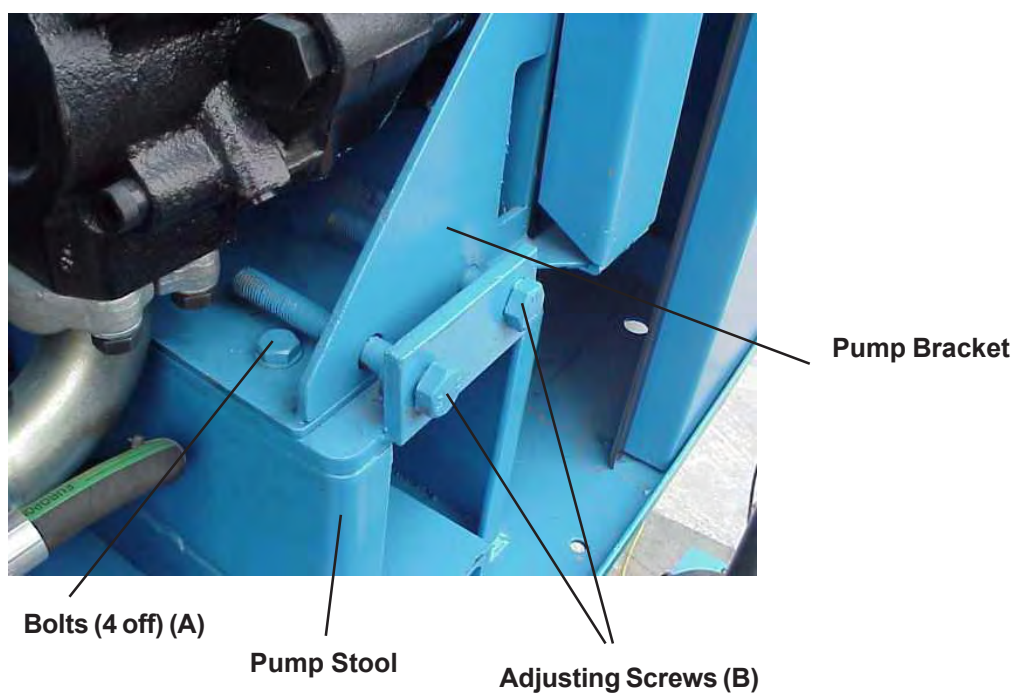


Figure 9ac Hydraulic Pump Drive Belt Tension Mechanism

Deflection Dimension mm / inches	Basic Setting Force kgf (lbf)	1.25 x Setting Force kgf (lbf)
See Section 9.11.5 (Step 3)	6.3 (13.95)	7.9 (17.4)

27/11/03

Figure 9ad Hydraulic Pump Drive Belts Tensioning Specifications

9.11.5 Method of Drive Belt Tensioning



Under no circumstances should any check on the belt tension be made whilst the machine is running. There is a risk of trapping parts of the body if this is done.

Procedure

1. Observe all safety warnings.
2. Close down the plant (Section 8.2) and implement the Lockout Procedure. Remove the guards from around the belt.
3. Calculate the deflection distance in inches on a basis of 16mm (0.625") deflection per 1 metre (1 yard) of belt span (Figure 9ae).




Centre to Centre Distance - metres (yards) x 16mm (0.625") = Deflection in mm (ins).

eg a centre distance of 2 metres (72") would be calculated as:

$$2 \times 16\text{mm} = 32\text{mm} \quad (0.625'' = 1\frac{1}{4}'')$$

4. If a belt tension indicator is available:

- a) Set the lower marker ring at the deflection distance required on the lower scale.

	<h2 style="margin: 0;">WARNING</h2>
	WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.
	LOCKOUT MACHINE. Refer to Section 9.1, Safety Information for Lockout Procedure.

Crusher/Engine Drive Belts

6 x 7500mm SPC,
Part Number 2441-0482




Hydraulic Pump Drive Belts

4 x 2000mm SPB,
Part Number 2441-0412

continued next page.....



- b) Set the upper marker ring against the bottom edge of the top tube.
 - c) Place the belt tension indicator on top of the belt at the centre of the belt span, and apply a force at right angles to the belt deflecting it to the point where the lower marker ring is level with the top of the adjacent belt.
 - d) Read off the setting force value indicated by the top edge of the upper marker ring.
 - e) Compare this value to the lbf value shown in the table:
Figure 9ab - Crusher Drive Belt Tensioning Specifications
Figure 9ad - Hydraulic Pump Drive Belt Tensioning Specifications
- 5. If a belt tension indicator is not available:**
- a) Use a spring balance to pull the belt down at the centre of the span.
 - b) When the belt has been pulled down (measure using a rule) by the deflection calculated in Step 3, read off the force from the spring balance.
- 6.** If the measured force falls within the values given, the drive should be satisfactory. A measured force below the lower value indicates under-tensioning. A new drive should be tensioned to the 1.25 x Setting Force value to allow for the normal drop in tension during the running-in period.

 WARNING	
	WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.
	LOCKOUT MACHINE. Refer to Section 9.1, Safety Information for Lockout Procedure.

- 7.** Replace all guards before start-up.



After the drive has been running for 15-20 minutes, the tension should be checked and readjusted to the Basic Setting Force value, if necessary by repeating the above procedure from Step 1.

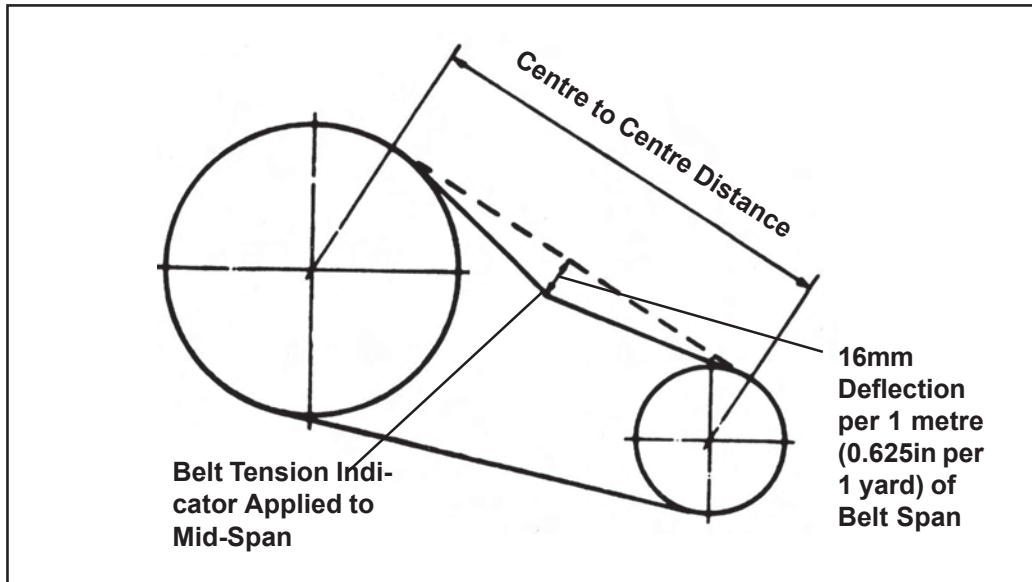


Figure 9ae Belt Tensioning Measurements

9.11.6 Trouble Shooting - Drive Belts

Small Cracks on V-Belt side and Base




Generally caused by shortage of belt tension but excessive heat and/or chemical fumes can also give same failure.

V-Belt Swelling or Softening

Caused by excessive contamination by oil, certain cutting fluids or rubber solvent.

Whipping During Running

Usually caused by incorrect tensioning, principally on long centre drives. If a slightly higher (or lower) tension does not cure the problem there may be a critical vibration frequency in the system which requires redesign or a Banded belt. Consult BL Pegson Ltd.

	<h2>WARNING</h2>
	<p>WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.</p>
	<p>LOCKOUT MACHINE. Refer to Section 9.1, Safety Information for Lockout Procedure.</p>



9.12 Plant - Conveyor Belts

9.12.1 Training of Belts

Before starting the conveyor, it is essential to check that:-

- The conveyor is straight and correctly levelled.
- The head and tail drums are correctly fitted. i.e. they are level, and that their axes are square to the centre line of the conveyor.
- All troughing and parallel idlers are correctly fitted with their axles square to the centre line of the conveyor, the side roller lead is in the correct direction (i.e. forward of centre) and all rollers are rotating freely.
- In the case of screw-type take up gears, that these are adjusted initially to take up slack from the belt and that equal tension is applied to each side such that the pulley is square to the centre line of the conveyor.
- Where skirt rubbers are fitted they are not bearing down heavily on the belt.
- There is no obstruction on the conveyor that could cause accident or damage when the conveyor is started.

	DANGER
	ENTANGLEMENT HAZARD. Refer to Section 9.1, Safety Information for relevant warning.

	WARNING
	WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.

Tracking should be carried out with the belt empty. With very stiff belts, which do not trough well nor make proper contact with the centre idlers roller when empty, it may only be possible to track the return strand when empty and the troughed side when loaded.

If the belt tends to run to one side the most likely cause of the trouble will usually be some distance before the point where the running off is apparent, and in the case of troughed strand probably at the second or third idler behind the point where the belt is moving out of its true line.



Under no circumstances should any adjustment be made on the belt whilst the machine is running. There is a risk of trapping parts of the body if this is done.

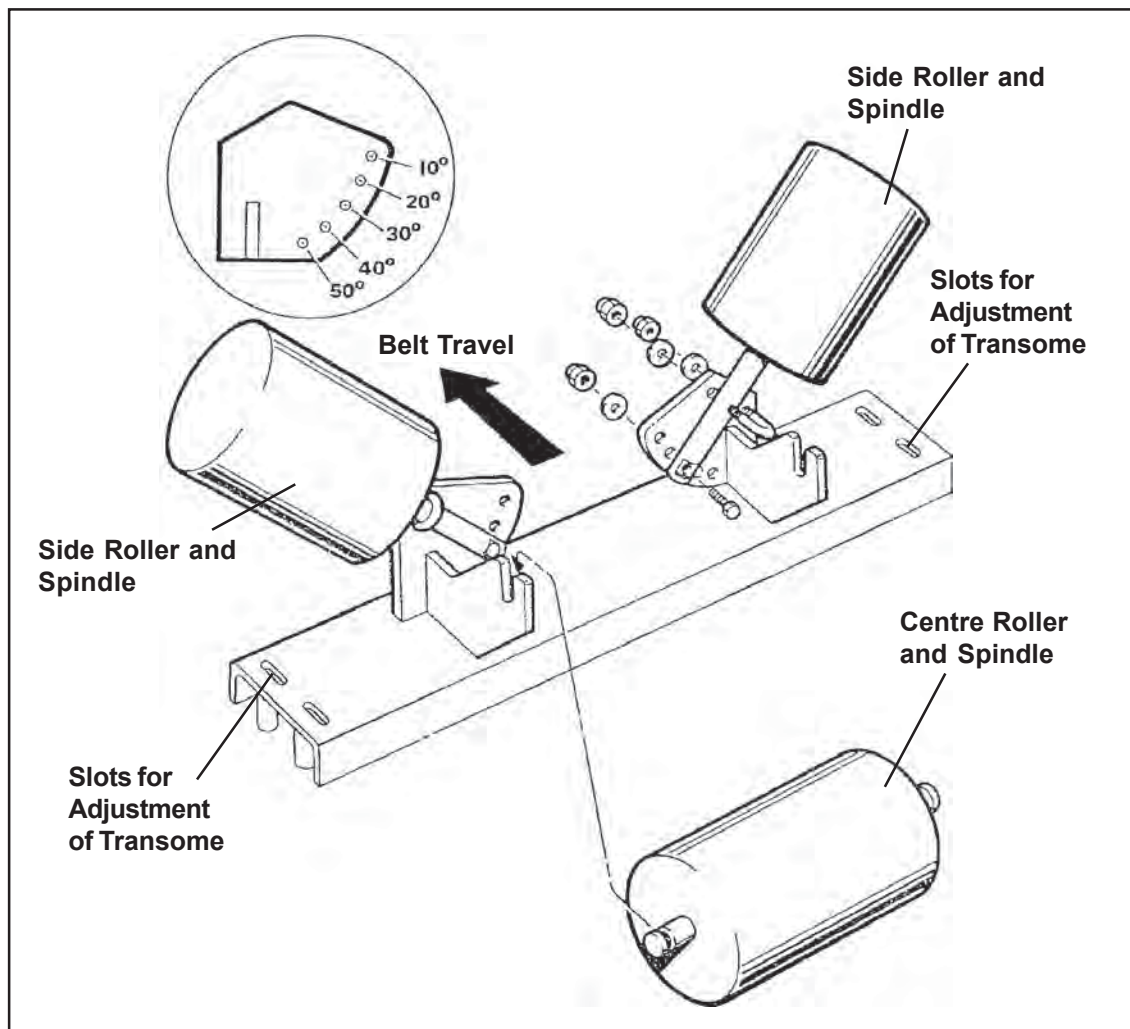


Figure 9af Transome Breakdown

NB. The fixings for the side roller spindles may vary slightly from those shown in the above typical illustration. The centre roller may be fastened with nuts or clips.

9.12.2 Conveyor Belt Tensioning

Both the product conveyor and the dirt conveyor are tensioned on the conveyor head drum.. Tensioning mechanisms are located on either side of the drum (Figure 9ag).

Best practice is to tension each side a little at a time and by the same amount until the belt is tensioned. When tensioned, the drum must be square to the conveyor frame.

The correct tension is achieved when the drive drum starts the belt and keeps it running when loaded without any slip occurring.




The tension screws should be kept clean and well oiled.

Tightening the Conveyor Belt

(Figure 9ag)

Procedure

1. Observe all safety warnings.
2. Close down the plant (Section 8.2) and implement the Lockout Procedure.
3. Loosen locknut A(2 off).
4. Tighten square or hexagon ended adjusting screw B(2 off).

 <h2 style="margin: 0;">WARNING</h2>	
	<p>WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.</p>
	<p>LOCKOUT MACHINE. Refer to Section 9.1, Safety Information for Lockout Procedure.</p>

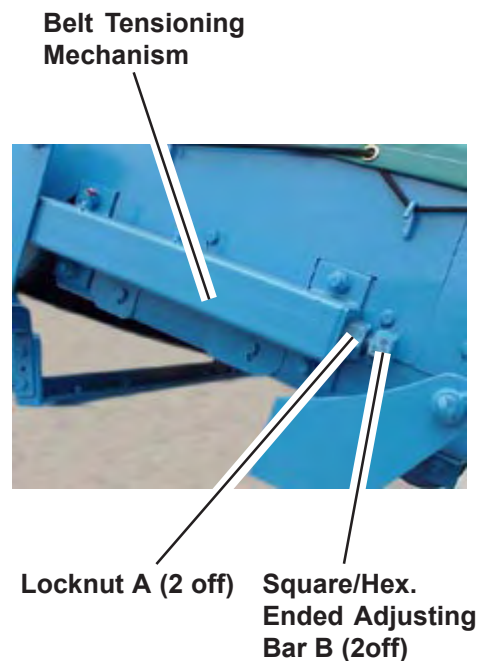


Figure 9ag Conveyor Belt Tensioning Mechanism

- Once correct tension has been achieved, tighten locknut A(2 off).



Under no circumstances should any adjustment be made on the belt whilst the machine is running. There is a risk of trapping parts of the body if this is done.

Slackening the Conveyor Belt




(Figure 9ag)

Procedure

- Observe all safety warnings.
- Close down the plant (Section 8.2) and implement the Lockout Procedure.
- Loosen locknut A(2 off).
- Slacken square or hexagon ended adjusting screw B(2 off).
- Once correct tension has been achieved, tighten locknut A(2 off).



Under no circumstances should any adjustment be made on the belt whilst the machine is running. There is a risk of trapping parts of the body if this is done.

 WARNING	
	WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.
	 LOCKOUT MACHINE. Refer to Section 9.1, Safety Information for Lockout Procedure.



9.12.3 Maintenance of Conveyor(s)

The following checks should be made regularly in order to keep the conveyor(s) in good working order:

- Observe all safety warnings.
- Close down the plant(Section 8.2) and implement the Lockout Procedure.
- Ensure that central feed onto the conveyor belt is maintained at all times and that the belt at the point of feed is kept straight and central at all times.
- Inspect the skirt plate sealing strips and ensure that they are adjusted close enough to the belt to prevent spillage or material jamming between the seals and the belt, but at the same time not bearing hard on the belt.
- Check that the belt generally is running centrally and straight on both the carrying strand and the return strand. If not, refer to Section 9.12.1 Training of Belts.
- Inspect the condition of the conveyor belt regularly and arrange for the earliest possible repair of any damage which may have occurred as this can make a worthwhile extension of the useful life of the belt. Repair a cut or tear in the rubber by cleaning with benzine and plugging with a rubber repair compound.

	DANGER
	ENTANGLEMENT HAZARD. Refer to Section 9.1, Safety Information for relevant warning.

	WARNING
	WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.
	LOCKOUT MACHINE. Refer to Section 9.1, Safety Information for Lockout Procedure.



Do not use clip joints for belt repairs or replacements, as they can be dangerous. Belt repairs/replacements should be performed by vulcanising only.



- Check that there is no evidence of belt slip at the driving drum, as belt slip will cause premature wear on the belt. Check also for undue sag between idlers. Both would indicate lack of belt tension (Section 9.12.2)
- Check regularly that the idler rollers are rotating freely. If not either free them or replace the idler. Failure to do so will result in belt wear and tracking problems.
- Check that the belt cleaning equipment is operating correctly and efficiently. In the case of scrapers ensure that they are not choked with a build up of material. Also check that the blades are not bearing on the belt any more than necessary, and that any blades which are unevenly worn or in a condition likely to cause damage to the belt are renewed immediately.
- Lubricate the dirt conveyor pivots.
- The grease in the head and tail drum bearings of the product conveyor and dirt conveyor need re-greasing bimonthly (Section 9.4).
- In the interests of efficient operation and general safety, it is important that operating conditions are kept as clean as possible and that any spillages are cleaned up regularly and are not allowed to build up.



As many inspections as possible should be made whilst the belt is stationary. When this is not possible extreme care should be taken when inspecting the belt whilst it is moving as this creates a risk of trapping parts of the body.

Note:- The grease nipples for the product conveyor and dirt conveyor tail drum are remote and located either side of the Trakpactor chassis.



9.12.4 Cleaning the Conveyor Belts

If your machines' conveyor belts are not properly maintained and skirting rubbers are not kept in proper adjustment, it may be necessary to remove resultant spillage material and / or blockages from the conveyor belts, particularly at the feed section.



It is important that these procedures are followed when cleaning the conveyor belts. Failure to follow these procedures can result in death or serious injury.

Procedure

1. The equipment should be switched off and isolated by means of the lockout and tagout procedure prior to the commencement of any work.
2. Use suitable personal protective equipment i.e. eye, foot, hand and head protection etc as may be required or necessary to undertake the task.
3. Gloves to protect the skin against abrasive materials, sharp surfaces, or penetration of the skin should be worn.
4. Goggles should be worn to protect from fragments, particles, or dust that could be ejected into the eyes.

 WARNING	
	WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.
	LOCKOUT PLANT. Refer to Section 9.1, Safety Information for Lockout Procedure.
	FALLING HAZARD. Refer to Section 9.1, Safety Information for relevant warning.



5. Not only the worker(s) cleaning the belts but also others close by who may be affected, must also wear protective equipment.



The conveyor belts can be cleaned using a number of methods. Before commencing, make sure all aforementioned procedures have been followed: -

- Using a high pressure air hose;
- Using a water hose;
- Using a rod with scraper attached, or a brush or shovel.

In the case of a blockage at a drive or tail drum it may be necessary to loosen the tension on the conveyor belt so that the blockage can be removed. See Sections 9.12.1 and 9.12.2 for re-tensioning and re-aligning the belt after blockage is removed.

When work is complete, make sure that all guards are closed / replaced and secured before re-starting the machine.

 WARNING	
	WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.
	LOCKOUT PLANT. Refer to Section 9.1, Safety Information for Lockout Procedure.
	FALLING HAZARD. Refer to Section 9.1, Safety Information for relevant warning.



9.13 Plant - Overband Magnetic Separator

The self cleaning suspended magnet utilises a two pulley design. The tail pulley has approximately 150mm (6") of take up available for both belt stretch and tracking purposes. To track the belt, the tail pulley should be moved in a direction to tighten the belt on the side opposite to the direction in which the belt wanders.



The belt magnet assembly is very powerful and permanently charged. The strong magnetic field produced could affect heart pacemakers, watches, credit cards, mobile phones etc. The operator has the sole responsibility to keep anyone at risk clear of the machine.

Start-Up of Self Cleaning Magnetic Separator

1. Be sure the magnet frame is visibly square and has not been damaged or twisted.
2. Check belt alignment.
3. Momentarily energise the belt drive and check that the belt is tracking properly and is not wandering laterally. **Never start the belt drive and allow it to run continuously until the belt is properly "trained".** If the belt wanders, note the direction and adjust as follows:

Magnetic Separator



Shedder Plate





Figure 9ah MagneticSeparator

Maintenance

- Belt tracking should be checked frequently and adjusted as necessary. Tighten the side of the belt to which you want the belt to move.
- Lubricate bearings on a schedule consistent with other equipment in use with your product.
- The speed of the belt on the magnetic overband separator is preset at the factory but can be altered by turning the adjusting screw located in the hydraulic line.



As many inspections as possible should be made whilst the belt is stationary. When this is not possible extreme care should be taken when inspecting the belt whilst it is moving as this creates a risk of trapping parts of the body.

	DANGER
	ENTANGLEMENT HAZARD. Refer to Section 9.1, Safety Information for relevant warning.
	WARNING
	WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.
	LOCKOUT MACHINE. Refer to Section 9.1, Safety Information for Lockout Procedure.



9.14 Plant - Dust Suppression

The Trakpactor plant is fitted with a plain water dust suppression system. The system consists of two spray bars each one having three nozzles. The spray bars are located in the following areas:-

- Crusher discharge area.
- Product conveyor discharge.

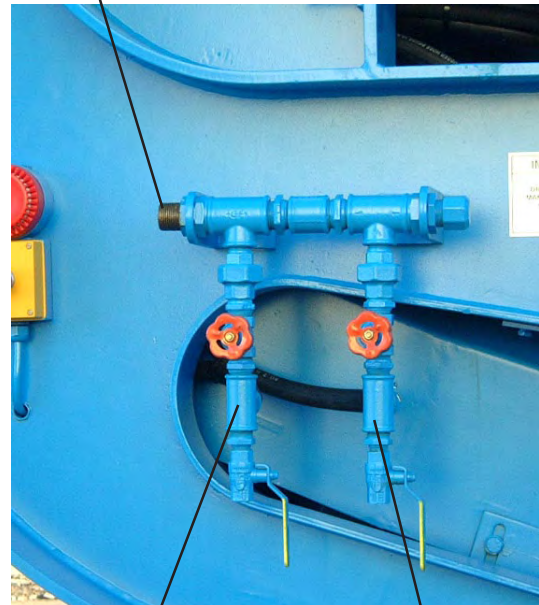
It is the responsibility of the customer to supply the system with clean water. This is supplied at the manifold (Figure 9ai). The total flow requirement for the system is 7 litres/min (2 US galls). This equates to a pressure requirement of 2.8 bar (42 psi).

Maintenance

All nozzles should be kept free of dirt and blockages. Each nozzle should be checked every time the dust suppression is switched on. Shut-off valves are provided for each spray bar at the manifold.

The system can be drained after operation by the drain valves located below the inlet manifold. This is particularly important in winter time when there is the likelihood of the system freezing.

Water Inlet



Product
Conveyor
Discharge

Crusher
Discharge
Area

Figure 9ai Dust Suppression Manifold



Do not spray water into the crusher as this will increase the wear.

9.15 Plant - Diesel Engine






For the diesel engine powerpack fitted to your Trakpactor to continue to perform safely, efficiently and reliably it is imperative that all the recommendations given in the separate engine manual are strictly followed with regard to:-

- Safety
- Operation
- Lubrication
- Maintenance
- Service
- Parts

Adhere to the regular maintenance schedules and procedures specified by the manufacturer

The diesel engine powerpack incorporates a Caterpillar engine but the external housing and some of the associated ancillary engine components are not necessarily of CAT origin.

For after sales and warranty matters, first contact your local Terex Pegson dealer for assistance.

 WARNING	
	WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.
	LOCKOUT MACHINE. Refer to Section 9.1, Safety Information for Lockout Procedure.

For the Twin Disc mechanically operated clutch refer to the instruction plate on the clutch (or separate manufacturers manual) for the correct adjustment and lubrication information. Also Section 9.15.1.



WARNING

Welding on a Machine/Unit equipped with the Electronic Engine

Before welding on a machine/unit equipped with an electronic engine, the following precautions should be observed

- Turn the Engine Control Switch to the 'OFF' position,
- Disconnect the **NEGATIVE** battery cable at the battery. If a battery disconnection switch is provided, open the switch.
- Disconnect multi-pin connectors from the Electronic Control Module (ECM) located on side of engine.
- Connect the welder ground cable directly to the member to be welded. Place the ground cable clamp as close as possible to the weld to reduce the possibility of welding current damage to bearings, hydraulic components, electrical components and ground straps. **Do not use electrical components , the ECM or Electrics Ground Stud for grounding the welder.**
- Protect wiring from the welding debris or splatter.
- Use standard welding techniques to weld the materials together.

0000224E



9.15.1 Manual Clutch Adjustment

IMPORTANT -TWIN DISC MANUAL CLUTCH INSTRUCTIONS

Refer to the Appendix (Section 11) for instructions regarding the engine clutch adjustment check to be made at the time of initial commissioning at new and the essential regular maintenance of the clutch thereafter.

New clutch plates have a 'wear in' period and the clutch may require **several** adjustments until new plates are 'worn in'.


A newly fitted power take off must have it's clutch adjustment checked at the following intervals:-

- After installation
- After 4 hours operation.
- After 10 hours operation.
- At the end of each working day for approximately 1 week.
- Once a week.

After 'wear in', clutch adjustments should be made on a weekly basis.

9.15.2 Clutch Maintenance

Adhere to the manufacturers separate manual, particularly in respect of the adjustment (9.15.1) and for lubricating the output shaft bearing (Figure 9aj).

	<h2 style="margin: 0;">WARNING</h2>
	<p>WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.</p>
	<p>LOCKOUT MACHINE. Refer to Section 9.1, Safety Information for Lockout Procedure.</p>

Bearing Grease Nipple



Figure 9aj Clutch Bearing Lubricator

9.15.3 Engine - ELC Coolant

Engines fitted with aluminium cored radiators are filled with Extended Life Coolant (ELC) and must **ONLY** be topped up or refilled with Cat ELC or a coolant that meets Cat EC-1 specification. If this is not available top up with deionized water and adjust mixture concentration in the shop. **Under no circumstances use any other coolant as damage will result and any warranty invalidated.**

Equipment is intended for use in ambient temperatures between -10°C to +40°C (+14°F to +104°F). Appropriate lubricants and coolant must be used as specified within the plant and engine operating and maintenance manuals.

For use in temperatures outside the above range consult your Terex Pegson Dealer or BL-Pegson Limited for details prior to commencement of operations.

ELC Coolant can be used where Ethylene Glycol based antifreeze has been used previously **BUT THE COOLING SYSTEM MUST BE THOUGHLY DRAINED AND FLUSHED THROUGH** before refilling with ELC coolant.

Adhere to the instructions on the external labelling as shown below.

Attention	
Filled with Cat® ELC™ (Extended Life Coolant)	
Mileage or Hours:	_____
Date Filled:	_____
<ul style="list-style-type: none">• Top up or refill with Cat ELC or a coolant that meets Cat EC-1 specification. If this is not available top with deionized water and adjust mixture concentration in the shop.• Add Cat ELC Extender after 6,000 hours, 300,000 miles or 500,000 kilometers.• To achieve optimum coolant life and protection, do NOT mix with conventional coolants, Supplemental Coolant Additive (SCA) or poor quality water.• Change out Cat ELC at 12,000 hours, 600,000 miles, 1,000,000 kilometers or 6 years, whichever comes first.	
<small>PEP5007-01</small>	CATERPILLAR® <small>© 2002 Caterpillar Printed in U.S.A.</small>



9.15.4 Check Fuel Level

Procedure

1. Observe all safety warnings.
 2. Check the fuel level indicator (Figure 9ak)
 3. Top up fuel level if required (Section 9.15.2).
- Fill the tank at the end of each day, where possible, to reduce overnight condensation within the tank.






Diesel fuel is highly flammable and is an explosion/burns hazard.

NEVER remove the filler cap or refuel, with the engine running.

NEVER add gasoline or any other fuel mixes to diesel because of increased fire or explosion risks.

DO NOT smoke while refilling or carrying out maintenance on the fuel system.

DO NOT carry out maintenance on the fuel system near naked lights or sources of sparks, such as welding equipment.

 <h2 style="margin: 0;">WARNING</h2>	
	<p>WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.</p>
	<p>LOCKOUT MACHINE. Refer to Section 9.1, Safety Information for Lockout Procedure.</p>

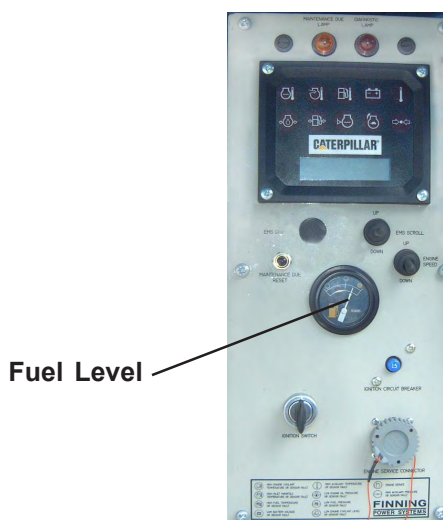


Figure 9ak Fuel Level Indicator - Engine Control Panel

9.15.5 Top Up Fuel Level



DO NOT fill the tank to capacity.

Monitor the gauge located on the Control Panel (Figure 9ak).

Allow room for expansion and wipe up spilt fuel immediately, otherwise paintwork will be damaged.

Procedure

1. Observe all safety warnings.
2. Close down the plant (Section 8.2) and implement the lockout procedure.
3. Remove the engine side access panel on the side nearest to the crusher to reveal the filler cap. (Figure 9al). Clean the area around the filler cap.
4. Remove the filler cap.
5. Fill the tank with diesel fuel.
6. Replace the cap and refit the engine access panel before start up.



Diesel fuel is highly flammable and is an explosion/burns hazard.

NEVER remove the filler cap or refuel, with the engine running.



 WARNING	
	WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.
	 LOCKOUT MACHINE. Refer to Section 9.1, Safety Information for Lockout Procedure.



Figure 9al Filler Cap



DANGER

NEVER add gasoline or any other fuel mixes to diesel because of increased fire or explosion risks.

DO NOT smoke while refilling or carrying out maintenance on the fuel system.

DO NOT carry out maintenance on the fuel system near naked lights or sources of sparks, such as welding equipment.



WARNING



WEAR PERSONAL PROTECTIVE EQUIPMENT.
Refer to Section 9.1, Safety Information for relevant warning.



LOCKOUT MACHINE.
Refer to Section 9.1, Safety Information for Lockout Procedure.

9.16 Plant - Vehicle Tracks



It is essential that the tracks are correctly tensioned at all times. Check track tension regularly.

Keeping the track properly adjusted will increase the service life of the track and drive components.

When ordering Spare Parts it is essential to quote the plant serial number with either a /S or /T suffix.




Frequently check for loose bolts, oil leaks, master pins are correctly located and tight, general wear and damage, correct track tension, etc. to ensure safe working and long life.

When travelling on a gradient, the tracks should be driven with the track idler rollers (Figure 9an) in front.

Procedure

9.16.1 Measuring Track Tension

1. Observe all Safety Warnings.
2. Position the plant on solid and level ground and drive 2 metres (2 yards) minimum in a forward direction, track idler roller leading.
3. Close down the plant (Section 8.2) and implement the Lockout Procedure.

 <h2 style="margin: 0;">WARNING</h2>	
	<p>WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.</p>
	<p>LOCKOUT MACHINE. Refer to Section 9.1, Safety Information for Lockout Procedure.</p>



Prior to attempting any manoeuvring of the plant the tracks must be free of obstructions, including crushed material and fines. Do not push or tow the plant. Failure to observe this warning could result in injury to persons and damage to the plant which may invalidate warranty.






4. One track at a time, measure the sag on the top part of the track on the longest section of unsupported track by placing a 'straight edge' long enough to reach from the drive sprocket to the nearest skid plate.
5. Measure the maximum amount of track sag from the high point of the track grouser to the bottom of the 'straight edge' (Figure 9am). Correctly adjusted the sag must be a maximum of 15mm (5/8") **but must not be less than 5mm (1/4")**.



Tracking the machine with incorrectly tensioned tracks can cause severe damage to the undercarriage components and may invalidate the warrant.

6. Depending upon the need to either slacken or tension the track(s) proceed as below.

continued.....

 <h2 style="margin: 0;">WARNING</h2>	
	<p>WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.</p>
	<p>LOCKOUT MACHINE. Refer to Section 9.1, Safety Information for Lockout Procedure.</p>

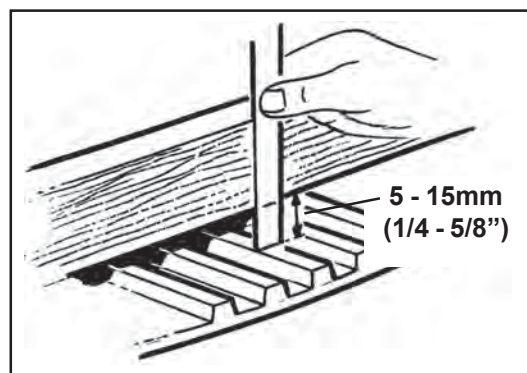


Figure 9am Measuring Track Tension



9.16.2 Adjusting Track Tension



'GREASE UNDER HIGH PRESSURE'

To Release Track Tension (**After measurement - Section 9.16.1**):-

Procedure

1. Observe all Safety Warnings.
2. Close down the plant (Section 8.2) and implement the Lockout Procedure.
3. Locate the access aperture on the side of the track frame and remove the cover (where fitted) to reveal the relief valve inside.
4. Next loosen the relief valve by turning anti-clockwise using gradual increments until the grease begins to be expelled.
Care must be taken not to loosen the relief valve too quickly because the grease inside is under high pressure.
5. When the correct track tension has been measured (Section 9.16.1), turn the relief valve clockwise to tighten and then clean away all trace of expelled grease.
6. Operate the plant in manoeuvring mode (Section 5.2.1) and drive the plant 50 metres (50 yards) forwards and 50 metres backwards, measure the sag and repeat the steps 1 - 4 if the



DANGER



SKIN INJECTION HAZARD
Refer to Section 9.1, Safety Information for relevant warning



WARNING



WEAR PERSONAL PROTECTIVE EQUIPMENT.
Refer to Section 9.1, Safety Information for relevant warning.



LOCKOUT MACHINE.
Refer to Section 9.1, Safety Information for Lockout Procedure.



Grease coming out of the relief valve under pressure can penetrate the body causing injury or death; do NOT watch the relief valve to see if grease is escaping but instead watch the track adjustment cylinder to verify that the track is being loosened.

DO NOT OVER TENSION THE TRACKS (Refer to Section 9.16.1).



track(s) sag is not enough. If room for manoeuvring the plant is restricted, drive the plant forwards and backwards several times over a shorter distance.

If the track fails to slacken after the grease fitting has been loosened, **do not** attempt to remove the tracks or disassemble the track tensioner, or remove the grease fitting. It is possible that running the tracks with the grease fitting loosened may help to expel the grease.



DANGER



SKIN INJECTION HAZARD
Refer to Section 9.1, Safety Information for relevant warning



WARNING



WEAR PERSONAL PROTECTIVE EQUIPMENT.
Refer to Section 9.1, Safety Information for relevant warning.



LOCKOUT MACHINE.
Refer to Section 9.1, Safety Information for Lockout Procedure.

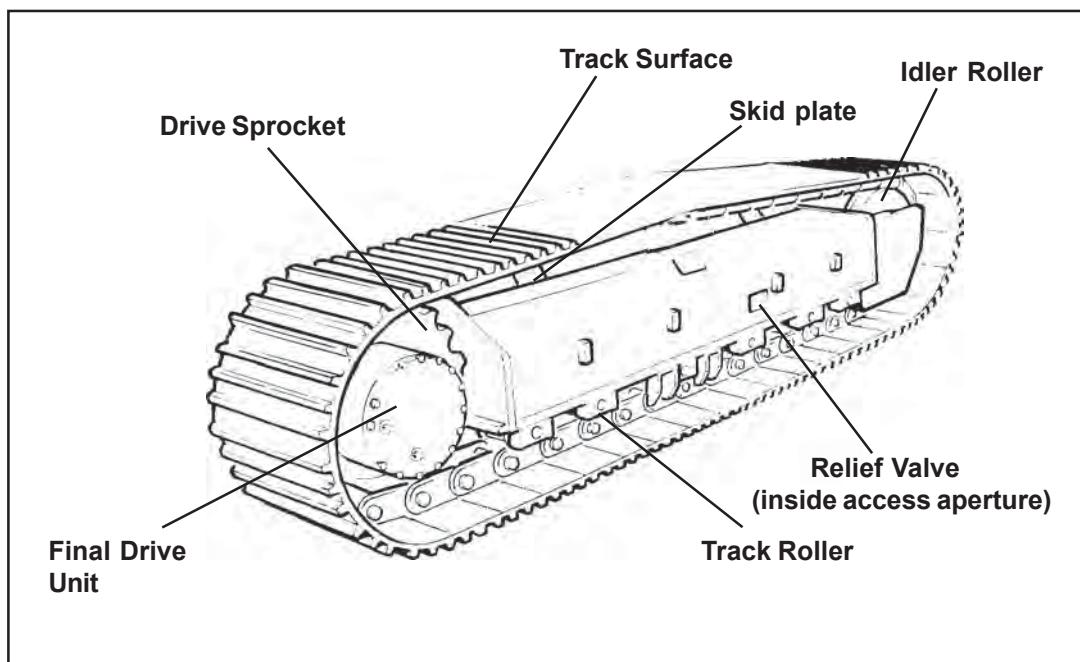


Figure 9an Vehicle Track Parts



To Increase Track Tension (**After measurement - Section 9.16.1**):-

Procedure

1. Observe all Safety Warnings.
2. Close down the plant (Section 8.2) and implement the Lockout Procedure.
3. Locate the access aperture on the side of the track frame and remove the cover (where fitted) to reveal the relief valve inside.
4. Connect the grease gun to the grease fitting and add grease until the track tension is within the specified dimension (Section 9.16.1). See Section 9.4.4. for the grease type and specification.
5. Operate the plant in manoeuvring mode (Section 5.2.1) and drive the plant 50 metres (50 yards) forwards and 50 metres backwards, measure the sag and repeat the steps 1 - 4 if the track(s) sag is too great. If room for manoeuvring the plant is restricted, drive the plant forwards and backwards several times over a shorter distance.



DANGER



SKIN INJECTION HAZARD
Refer to Section 9.1, Safety Information for relevant warning



WARNING



WEAR PERSONAL PROTECTIVE EQUIPMENT.
Refer to Section 9.1, Safety Information for relevant warning.



LOCKOUT MACHINE.
Refer to Section 9.1, Safety Information for Lockout Procedure.



9.16.3 Track Maintenance

(Figure 9an)

Maintenance Schedule

- The first drive oil replacement is to be carried out after 100 operating hours of the gearbox.
- There after replace the drive oil every 1000 hours or at least once per year.
- Check the drive oil level every 100 working hours.

Daily

Procedure

1. Observe all safety warnings.
2. Close down the machine (Section 8.2) and implement the Lockout Procedure.
3. Check the track rollers and idler wheels for possible leakage.
4. Check the track surface of the track rollers, idler wheels, track shoes and drive sprockets for wear and loose mounting bolts.
5. Clean out any heavy build up of material from around the tracks.
6. Check the tension of the tracks (Section 9.16.1) and adjust tension if necessary (Section 9.16.2).

	WARNING
	WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.
	LOCKOUT MACHINE. Refer to Section 9.1, Safety Information for Lockout Procedure.





To maximise the life of the track, keep it movable and avoid damage, the plant should be moved at least every week, by a distance exceeding four times the track length. It should also be parked on level ground overnight and during periods to of non-usage. This is particularly important when working in adverse conditions.

9.16.4 Drive Oil Filling and Draining

Oil Filling

Procedure

1. Observe all safety warnings.
2. Close down the plant (Section 8.2) and implement the Lockout Procedure.
3. Make sure the gearbox housing is horizontal.
4. Rotate the gearbox housing so that one plug is at the 12 o'clock position and the other plug is at the 9 o'clock position (Figure 9ao).
5. Unscrew the two plugs and fill from the upper hole until the oil flows from the hole located at the 9 o'clock position. See Section 9.4.4 for oil type and specification.
6. Clean plugs using a clean non-flammable solvent.
7. Apply pipe sealant to the plugs and install.
8. Repeat procedure on the other final drive.

 <h2 style="margin: 0;">WARNING</h2>	
	<p>WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.</p>
	<p>LOCKOUT MACHINE. Refer to Section 9.1, Safety Information for Lockout Procedure.</p>

Note:- Over filling the final drive will cause the travel motor seal to allow hydraulic oil or water to enter and contaminate the drive.

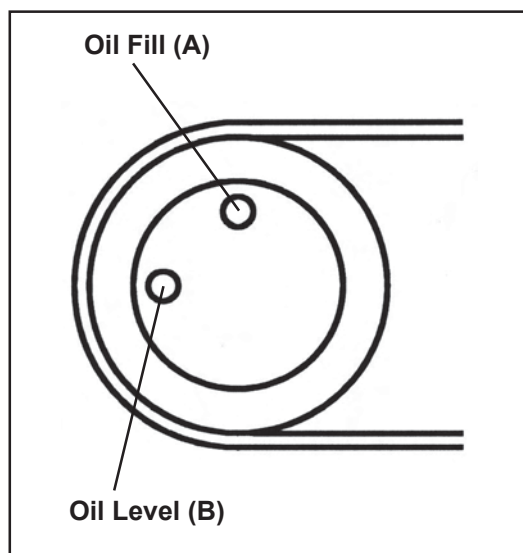





Figure 9ao Tracks - Oil Filling



Oil Draining

Procedure

1. Observe all safety warnings.
2. Close down the plant (Section 8.2) and implement the Lockout Procedure.
3. Rotate the gearbox housing until a plug is at the 6 o'clock position (Figure 9ap).
4. Unscrew both plugs and discharge the oil.
5. Clean plugs using a clean non-flammable solvent.
6. Apply pipe sealant to the plugs and install.
7. Repeat procedure on the other final drive.

	WARNING
	WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, Safety Information for relevant warning.
	LOCKOUT MACHINE. Refer to Section 9.1, Safety Information for Lockout Procedure.

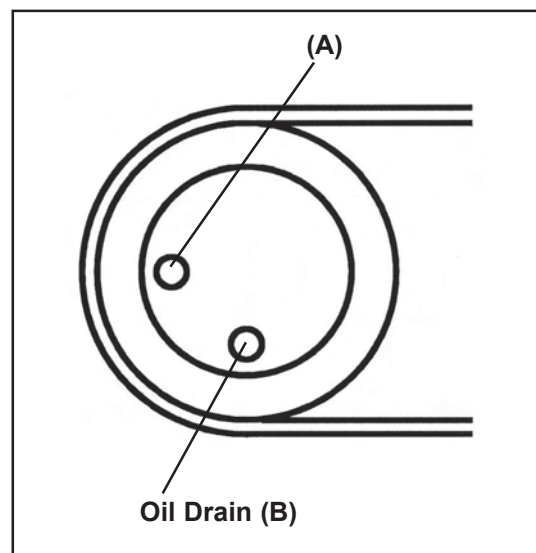


Figure 9ap Tracks - Oil Draining



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PEGSON

9 - Maintenance

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TEREX
PEGSON

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IMPORTANT

**TO ORDER REPLACEMENT SPARE PARTS CONTACT YOUR LOCAL
BL-PEGSON DISTRIBUTOR TO OBTAIN GENUINE PARTS MANUFACTURED
TO ORIGINAL SPECIFICATIONS UNDER STRICT QUALITY CONTROL.**

**ALWAYS QUOTE THE SERIAL NUMBER STAMPED ON THE
PLANT/MACHINE IDENTITY PLATE**

YOUR LOCAL REPLACEMENT PARTS CONTACT (fill in when known)

BL-PEGSON DISTRIBUTOR.....

CONTACT NAME(S).....

.....

TELEPHONE NUMBER.....

FACSIMILE NUMBER.....

E MAIL ADDRESS.....

.....

.....

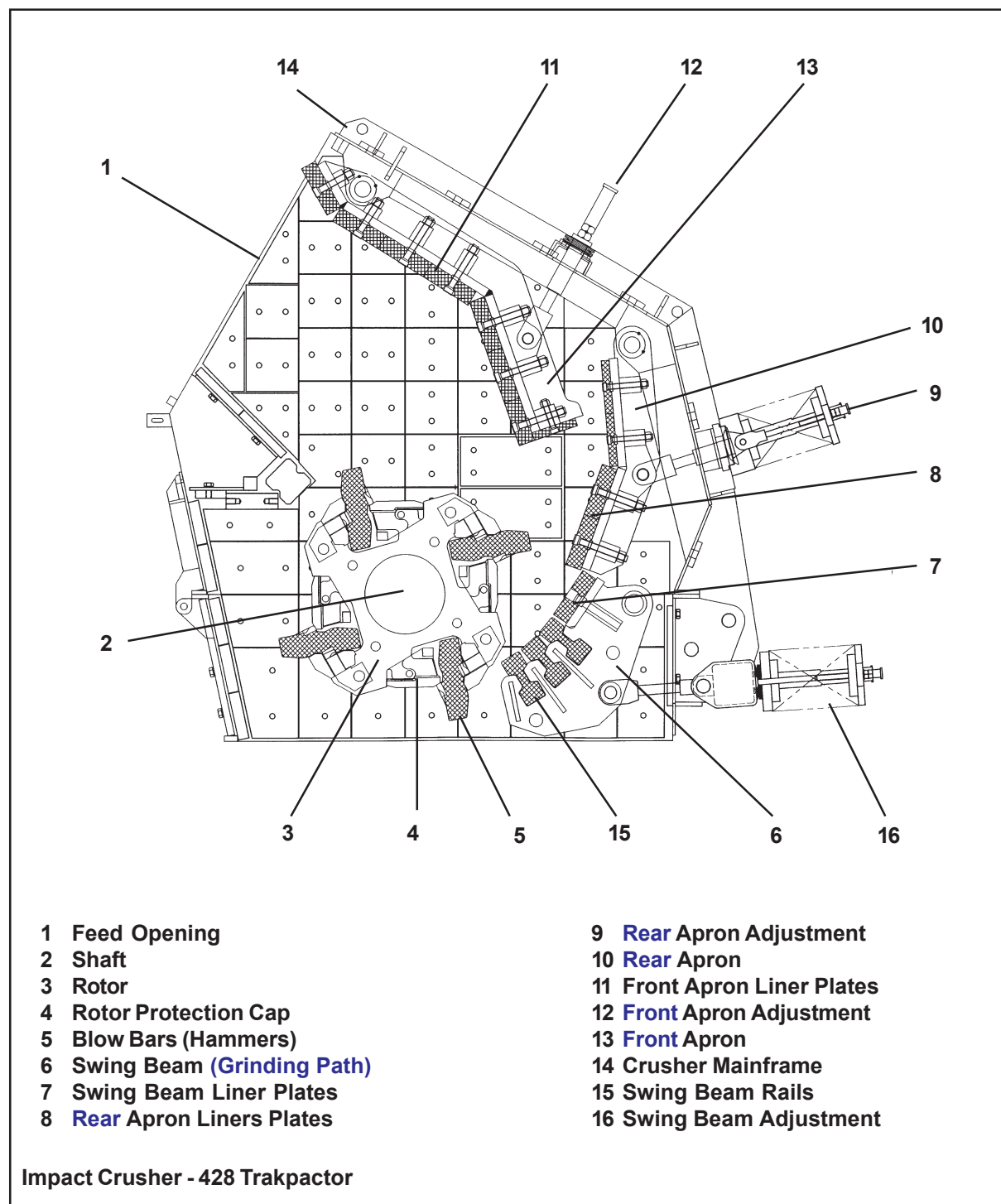
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REMEMBER!

**THE LOCAL DISTRIBUTOR WILL ALSO CATER FOR YOUR SERVICE
REQUIREMENTS WITH TRAINED SERVICE ENGINEERS.**

BL-Pegson Limited, Coalville, England. Tel : +44 1530 518600, Fax : +44 1530 518618

10.1 Impact Crusher Parts



Impact Crusher - Blow bar Assembly

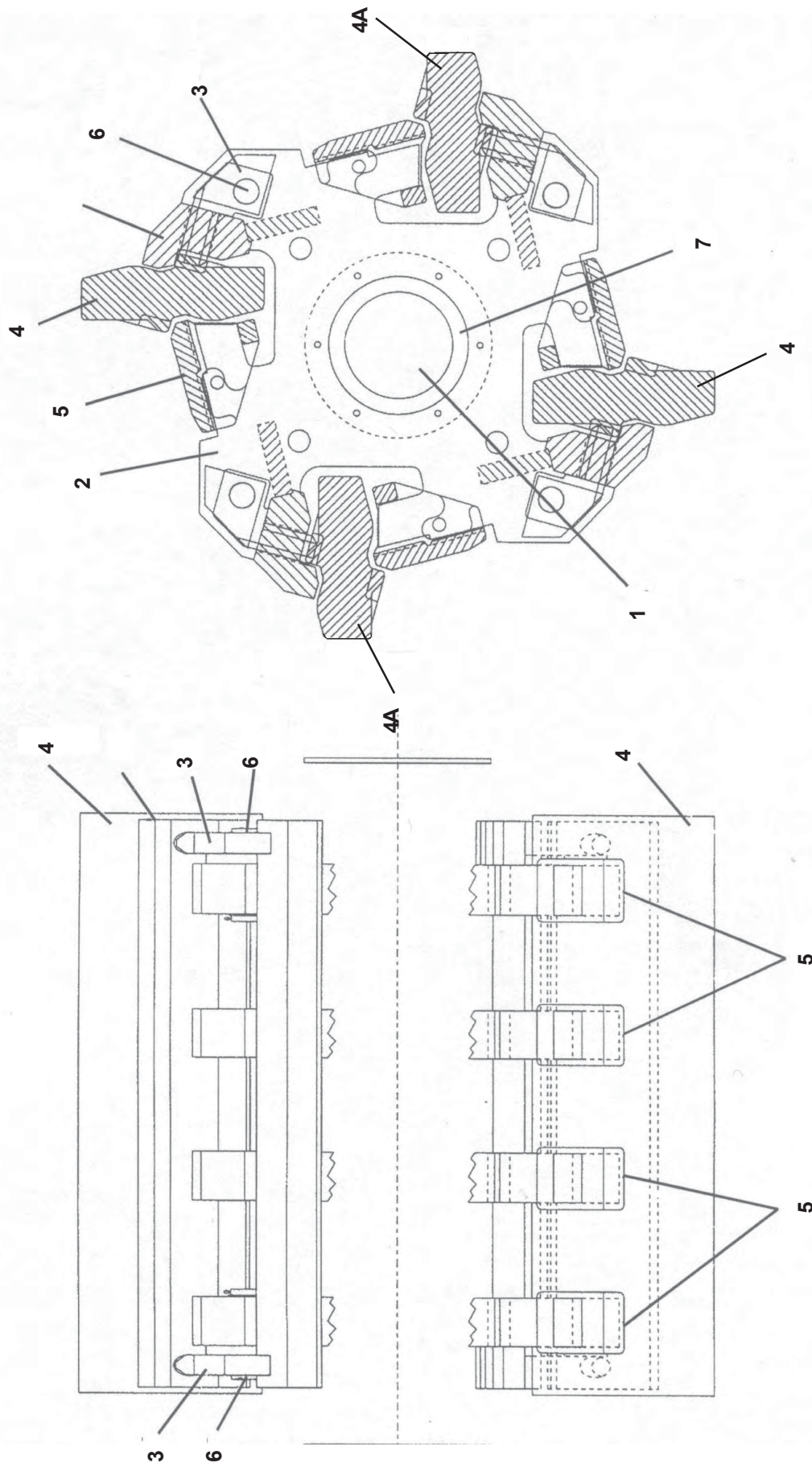
REF	PART NUMBER	DESCRIPTION	QUANTITY
1	A6984/93	ROTOR SHAFT	1
2	A6984/76H	CAST ROTOR	1
3	IM 020 4228	AXIAL SECURING PLATE	8
4	A6984/80	STD. HIGH Mg. BLOW BAR (LONG)	2
4A	A6984/79	STD. HIGH Mg. BLOW BAR (SHORT)	2
5	IM 024 4228	ROTOR PROTECTION CAP	16
6	A6984/23/117	PIN – AXIAL SECURE PLATE	8
	2201-0165	SPLIT PIN	8
	A6984/23/8	WASHER	8
7	2450-5108	RINGFEEDER	2
N/S	2971-2002	HYDRAULIC HAMMER EXTRACTION TOOL	1
N/S	2527-1048	HOSE ASSY	2
N/S	2520-6557	3/8 M COUPLING	3
N/S	2520-6558	3/8 F/M COUPLING	3
N/S	2520-6003	3/8 M/M ADAPTOR	10
N/S	2500-1015	BONDED SEAL	10

THESE PARTS ARE
FOR THE
EXTRACTION TOOL

A6984/96 – 23/11/04

REF	PART NUMBER	DESCRIPTION	QUANTITY
ALTERNATIVE HIGH CHROME / HIGH MANGANESE BLOW BARS OF 2 x LONG / 2 x SHORT CONFIGURATION SHOWN BELOW BUT CAN BE 4 LONG HIGH CHROME BARS			
4	A6984/83	HIGH CHROME BLOW BAR (LONG)	2
4A	A6984/79	HIGH MANGANESE BLOW BAR (SHORT)	2
ALTERNATIVE MARTENSITIC / HIGH MANGANESE BLOW BARS OF 2 x LONG / 2 x SHORT CONFIGURATION SHOWN BELOW BUT CAN BE 4 LONG MARTENSITIC BARS			
4	A6984/121	MARTENSITIC BLOW BAR (LONG)	2
4A	A6984/79	HIGH MANGANESE BLOW BAR (SHORT)	2
IMPORTANT BEFORE FITTING BLOW BARS OF ALTERNATIVE TYPES OF STEEL, READ THE ADDENDUM '428 IMPACT CRUSHER – GUIDE TO EFFICIENT OPERATION' OR CONSULT YOUR TEREX PEGSON DEALER			

01/12/04



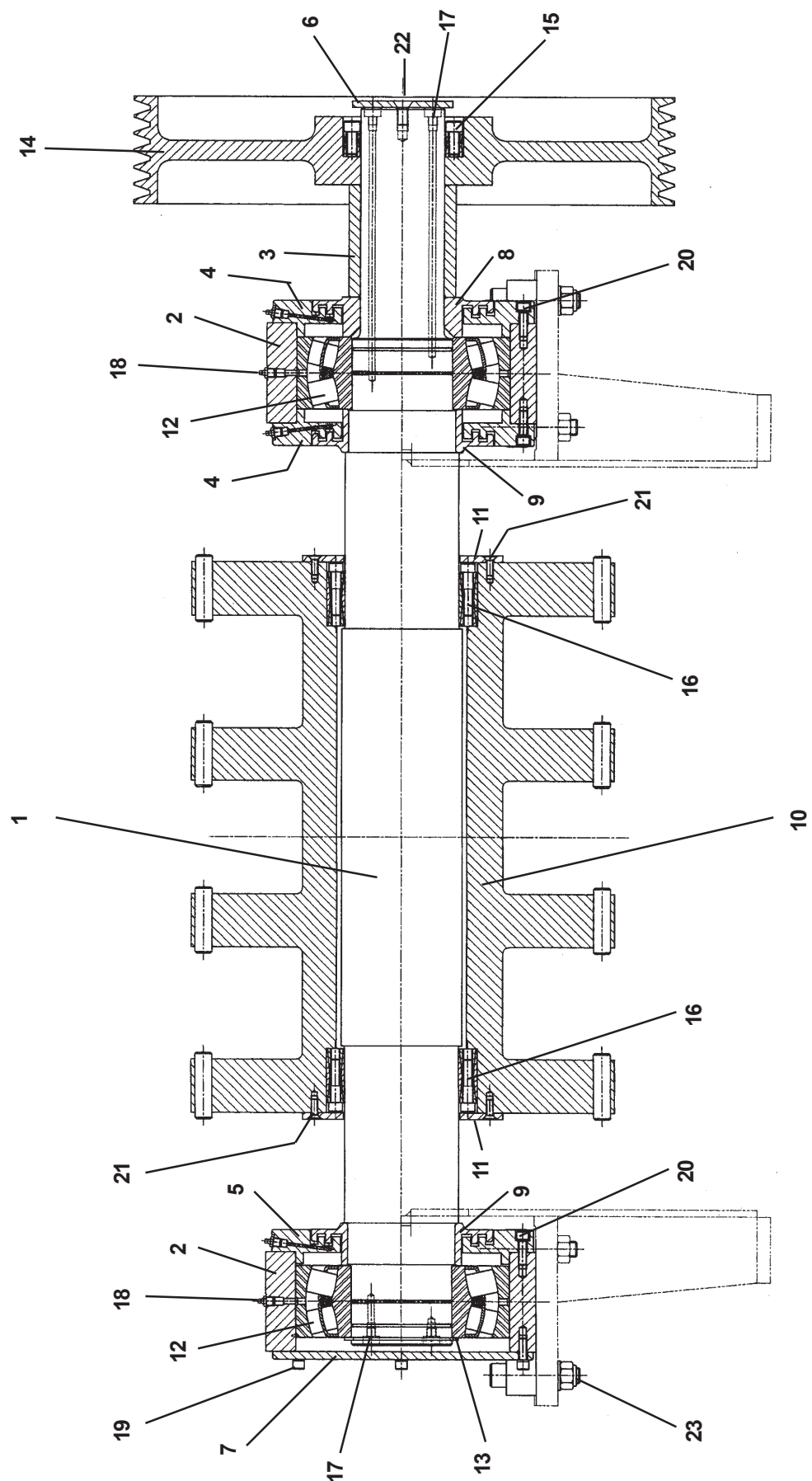
428 Impact Crusher - Blow bar Assembly

AX846-901-8EN-02a 209/300

Impact Crusher - Rotor Shaft Assembly

REF	PART NUMBER	DESCRIPTION		QUANTITY
1	A6984/93	ROTOR SHAFT		1
2	A6984/5	BEARING HOUSING		2
3	A6984/94	SPACING COLLAR		1
4	A6984/7	OUTER LABYRINTH – FIXED		2
5	A6984/8	OUTER LABYRINTH – FLOATING		1
6	A6984/97	SHAFT END DISC		1
7	A6984/52	BEARING HOUSING COVER PLATE		1
8	IM 027D 4228	INNER LABYRINTH – 125 BORE		1
9	IM 027F 4228	INNER LABYRINTH – 160 BORE		2
10	A6984/76P	CAST ROTOR		1
11	A6984/81	ROTOR END CAP		2
12	2416-0417	BEARING – SPHERICAL ROLLER		2
13	2430-1101	CIRCLIP – EXTERNAL ? 150		1
14	AX846/113	PULLEY		1
15	2450-8060	PULLEY LOCKING BUSH		1
16	2450-5108	RINGFEDDER		2
17	2510-3861	PLUG – RECESSED		4
18	2530-1008	GREASE NIPPLE		5
19	2222-0187	SCR – HEX SKT – CAP HD.		6
	2211-0008	WASHER - SPRING		6
20	2222-0188	SCR - HEX SKT - CAP HD.		18
	2211-0008	WASHER - SPRING		18
21	2226-0795	SCR - CSK HD.		12
22	2226-0584	SCREW - CSK HD.		2
23	2222-0356	SCR - HEX SKT - CAP HD.		8
	2210-0023	WASHER - PLAIN		8
	2217-0011	NUT - HEX		8
N/S	A6984/50/1	ROTOR LOCK	THESE ITEMS ARE LH & RH HANDED	1
N/S	A6984/50/2	ROTOR LOCK		1

A6984/96 – 23/11/04

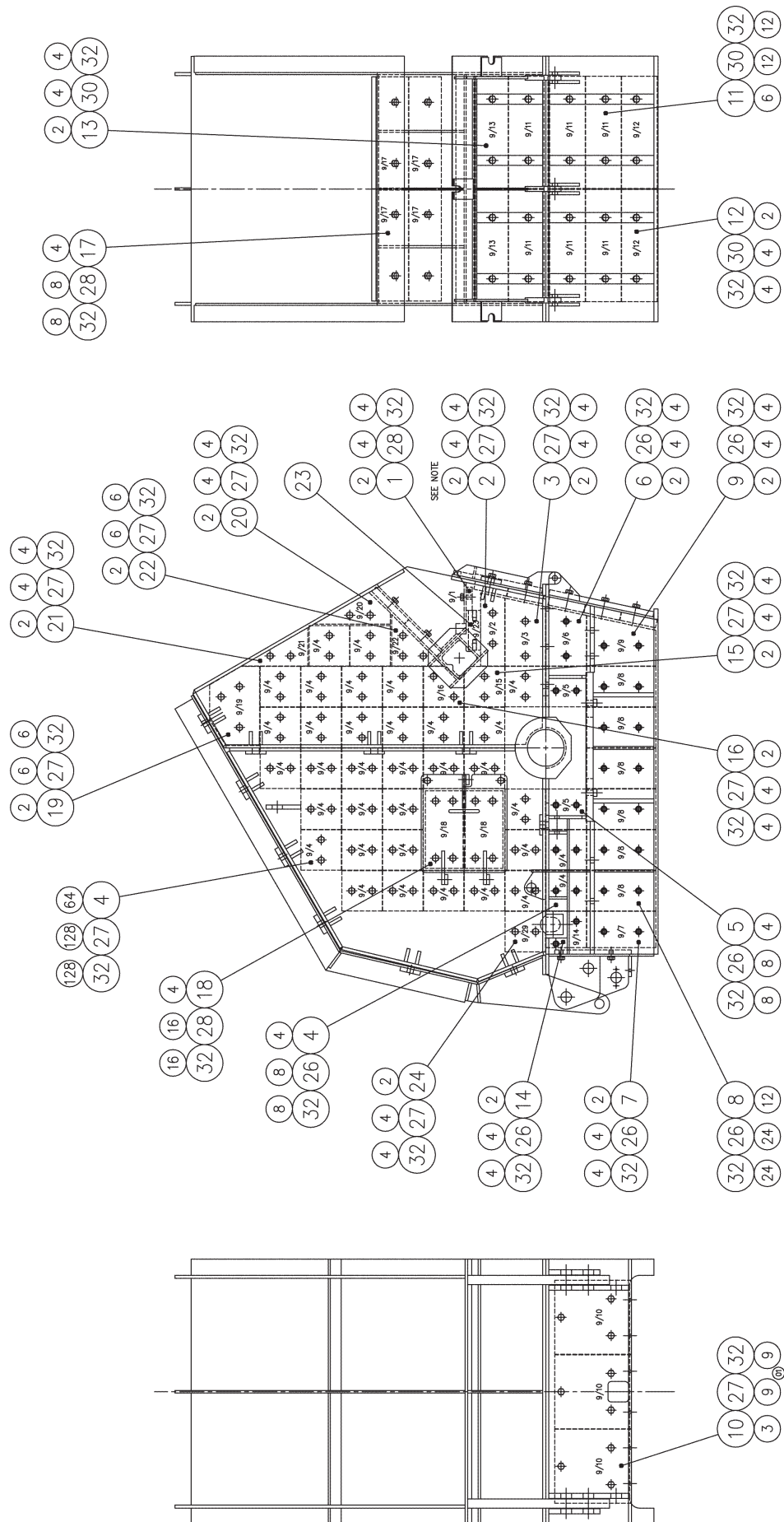


428 Impact Crusher - Rotor Shaft Assembly

Impact Crusher - Mainframe Liner Plates

REF	PART NUMBER	DESCRIPTION	QUANTITY
1	A6984/9/1	LINER PLATE – 9.8 kg. EACH	2
2	A6984/9/2	LINER PLATE – 6.4 kg. EACH	2
3	A6984/9/3	LINER PLATE – 9.7 kg. EACH	2
4	A6984/9/4	LINER PLATE – 6.2 kg. EACH	68
5	A6984/9/5	LINER PLATE – 6.2 kg. EACH	4
6	A6984/9/6	LINER PLATE – 8.4 kg. EACH	2
7	A6984/9/7	LINER PLATE – 9.5 kg. EACH	2
8	A6984/9/8	LINER PLATE – 10.5 kg. EACH	12
9	A6984/9/9	LINER PLATE – 11.2 kg. EACH	2
10	A6984/9/10	LINER PLATE – 11.3 kg. EACH	3
11	A6984/9/11	LINER PLATE – 30. 8 kg. EACH	6
12	A6984/9/148	LINER PLATE – 39 kg. EACH	2
13	A6984/9/13	LINER PLATE – 28.2 kg. EACH	2
14	A6984/9/14	LINER PLATE – 5.6 kg. EACH	2
15	A6984/9/15	LINER PLATE – 6 kg. EACH	2
16	A6984/9/16	LINER PLATE – 5.6 kg. EACH	2
17	A6984/9/17	LINER PLATE – 29 kg. EACH	4
18	A6984/9/18	LINER PLATE – 11 kg. EACH	4
19	A6984/9/19	LINER PLATE – 13 kg. EACH	2
20	A6984/9/20	LINER PLATE – 5.2 kg. EACH	2
21	A6984/9/21	LINER PLATE – 5.2 kg. EACH	2
22	A6984/9/22	LINER PLATE – 5 kg. EACH	2
23	A6984/9/23	LINER PLATE – 102 kg.	1
24	A6984/9/29	LINER PLATE – 6 kg. EACH	2
25			
26	2222-0297	SCREW	56
27	2230-1285	SCREW	177
28	2230-1287	SCREW	28
29			
30	2232-1281	BOLT	20
31			
32	2211-0012	WASHER-SPRING	281

A6984/19_02mod – 23/11/04



SIDE LINER BOLTS TIGHTENING TORQUE - 420Nm (310 lbf ft)

A6984/19

428 Impact Crusher - Mainframe Liner Plates

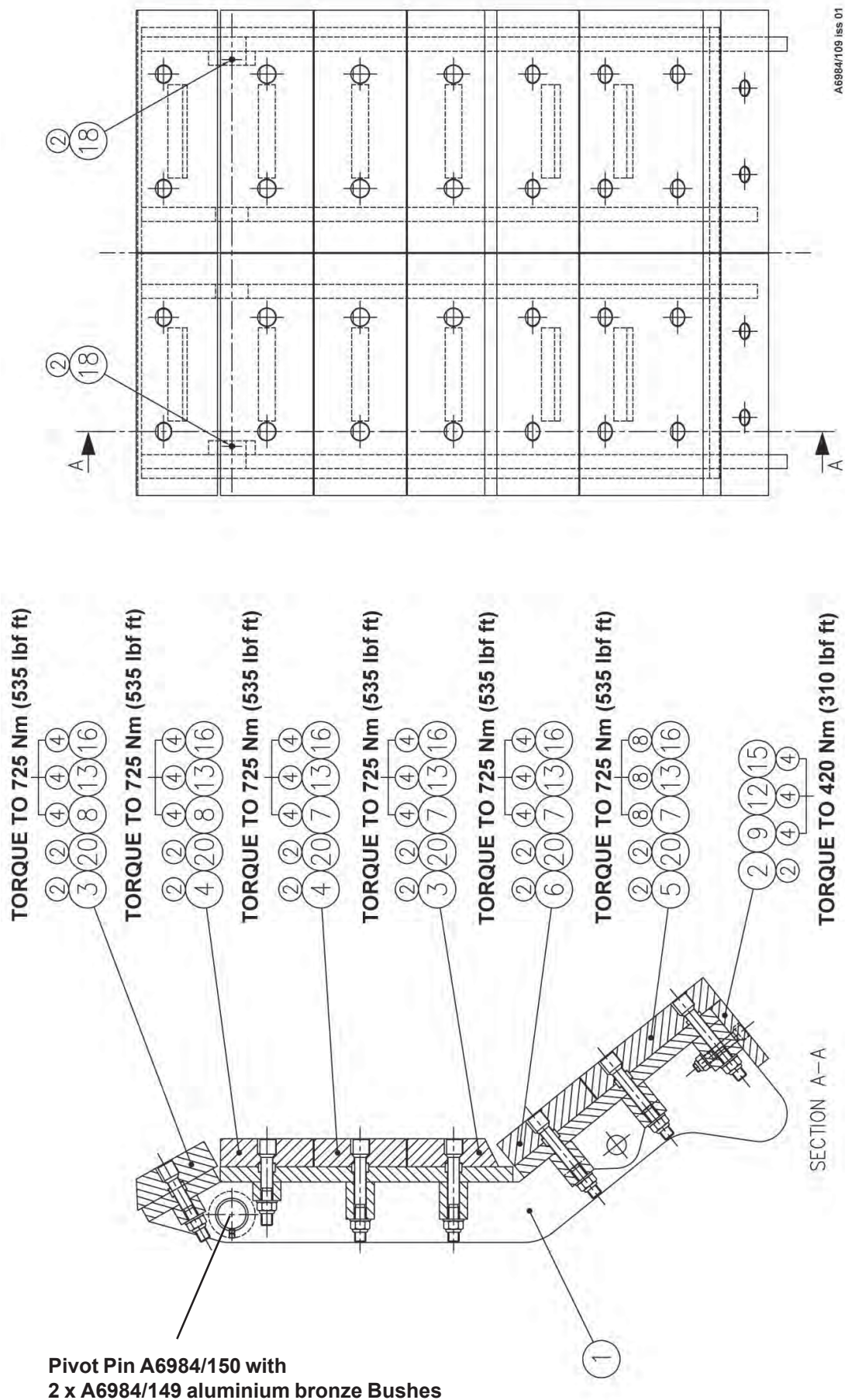
Impact Crusher - Front Impact Apron Liner Plates

REF	PART NUMBER	DESCRIPTION	QUANTITY
1	A6984/106	FRONT IMPACT APRON	1
2	A6984/9/25	LINER PLATE	2
3	A6984/9/26	LINER PLATE	4
4	A6984/9/28	LINER PLATE	4
5	A6984/102	LINER PLATE	2
6	A6984/103	LINER PLATE	2
7	A6984/25/1	SCREW	20
8	A6984/25/2	SCREW	8
9	A6984/25/3	SCREW	4
10			
11			
12	2210-0021	WASHER – PLAIN – FORM A 20	4
13	2210-0023	WASHER – PLAIN – FORM A 24	28
14			
15	2217-0009	NUT – HEX – PHILIDAS MKV M20	4
16	2217-0011	NUT – HEX – PHILIDAS MKV M24	28
17			
18	2220-0206	SCREW	4
19			
20	2220-06	KEY – 36x20x200 SQ END.	12

A6984/109_01 – 26/09/03

ITEM	PART NO:	DESCRIPTION	QTY	WEIGHT
1	A6984/106	FRONT IMPACT APRON	1	685 kg.
2	A6984/9/25	LINER PLATE	2	19.8 kg. each
3	A6984/9/26	LINER PLATE	4	43 kg. each
4	A6984/9/28	LINER PLATE	4	47.2 kg. each
5	A6984/102	LINER PLATE	2	84 kg. each
6	A6984/103	LINER PLATE	2	56 kg. each

A6984/109_01 – 26/09/03



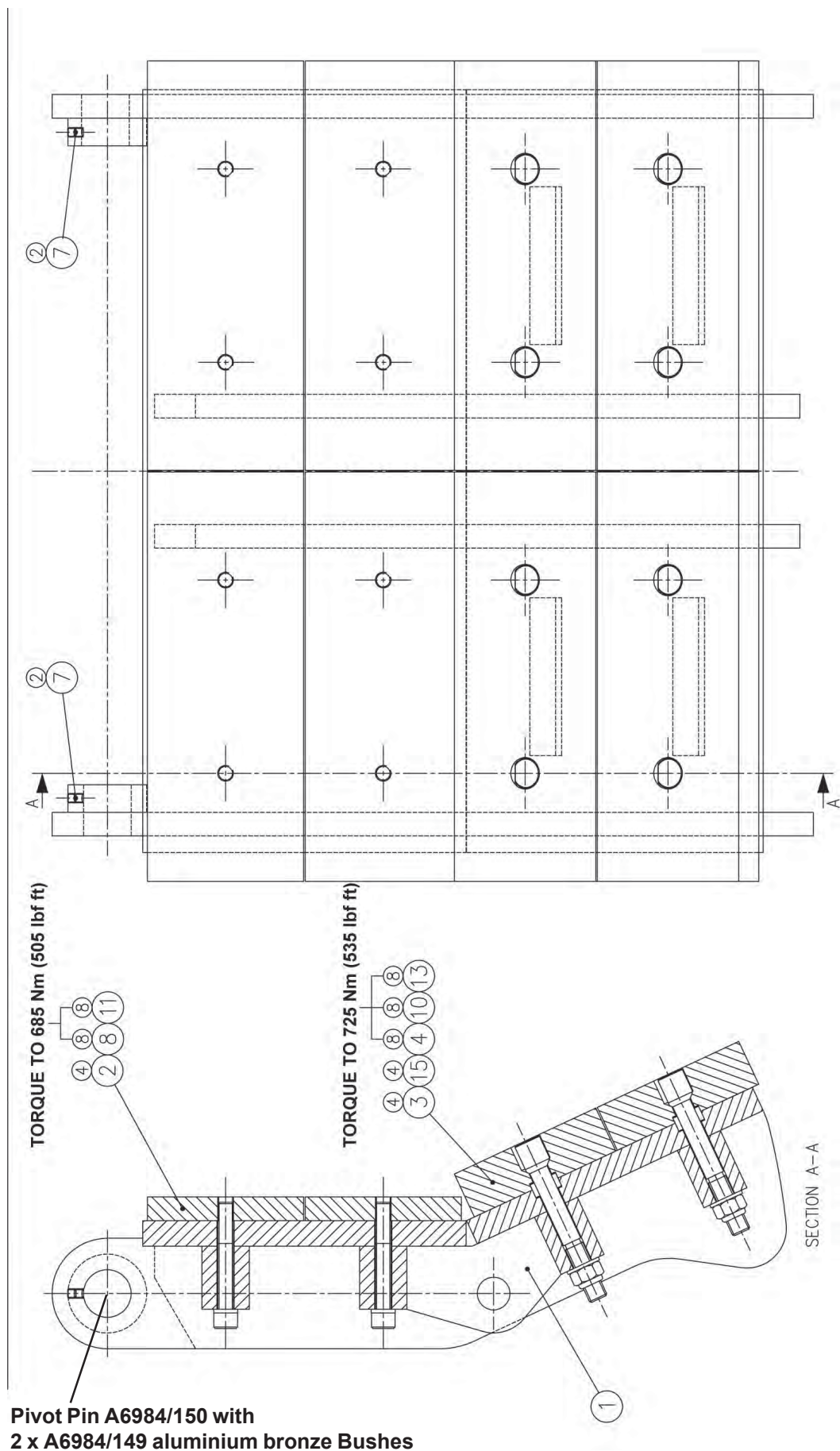
Impact Crusher - Rear Impact Apron Liner Plates

REF	PART NUMBER	DESCRIPTION	QUANTITY
1	A6984/107	REAR IMPACT APRON	1
2	A6984/9/24	LINER PLATE	4
3	A6984/9/28	LINER PLATE	4
4	A6984/25/1	SCREW	8
5			
6			
7	2220-0206	SCREW	4
8	2222-0313	SCREW	8
9			
10	2210-0023	WASHER – PLAIN – FORM A 24	8
11	2211-0012	WASHER – SPRING -SQ SECT. 20	8
12			
13	2217-0011	NUT – HEX	8
14			
15	2432-0577	KEY	4

A6984/110_01 – 26/09/03

ITEM	PART NO:	DESCRIPTION	QTY	WEIGHT
1	A6984/107	REAR IMPACT APRON	1	435 kgs
2	A6984/9/24	LINER PLATE	4	24.2 kgs each
3	A6984/9/28	LINER PLATE	4	47.2 kgs each

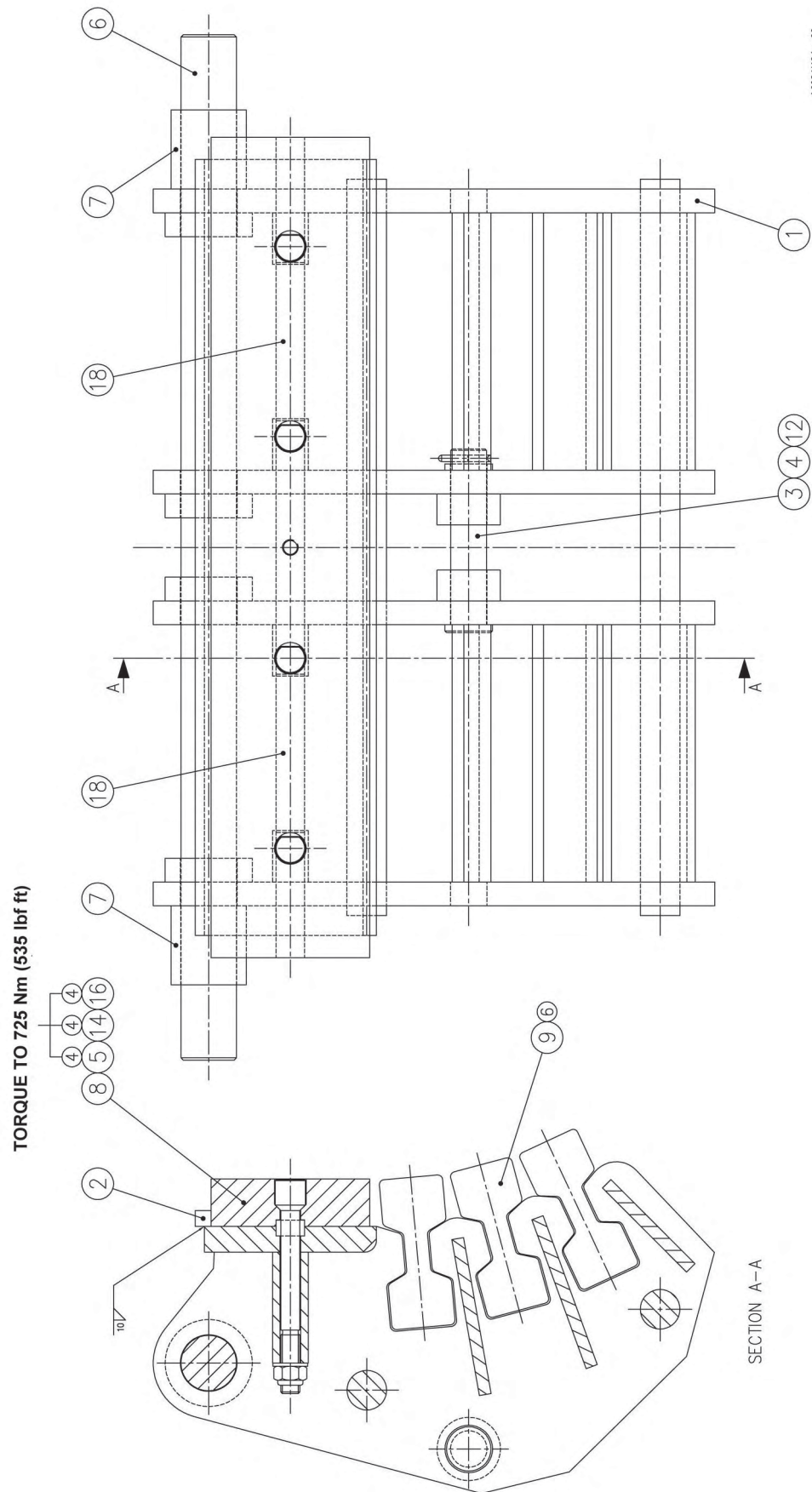
A6984/110_01 – 26/09/03



Impact Crusher - Grinding path - Swing Beam Liners

REF	PART NUMBER	DESCRIPTION	QUANTITY
1	A6984/43/1	SWING BEAM	1
2	A6984/43/2	SHEAR BLOCK	1
3	A6984/23/13	SWING BEAM CONNECTING PIN	1
4	A6984/23/14	SWING BEAM CONNECTING PIN WASHER	1
5	A6984/25/4	SCREW	4
6	A6984/26	SWING BEAM PIVOT BAR	1
7	A6984/51	SWING BEAM LOCATING SLEEVE	2
8	A6984/62	LINER PLATE	1
9	A6984/132	SWING BEAM RAIL	6
10			
11			
12	2201-0182	PIN – SPLIT COTTER	1
13			
14	2210-0023	WASHER	4
15			
16	2217-0011	NUT	4
17			
18	2432-0577	KEY 36 x 20 x 200 SQ END	2
CHAIN CURTAIN FOR FINES CHUTE – NOT ILLUSTRATED			
	A6984/145	CHAIN MOUNTING PLATE	2
	A6984/146	CHAIN SPACER	1
	A6984/147	CLAMP STRIP	1
	AX864/119	RUBBER FOR CHAIN CURTAIN	1
	2321-1102	CHAIN – 2 LINKS LONG	2
	2321-1103	CHAIN – 3 LINKS LONG	2
	2321-1104	CHAIN – 6 LINKS LONG	2
	2321-1105	CHAIN – 7 LINKS LONG	7
	2232-1214	BOLT	13

A6984/42_00 – 23/11/04

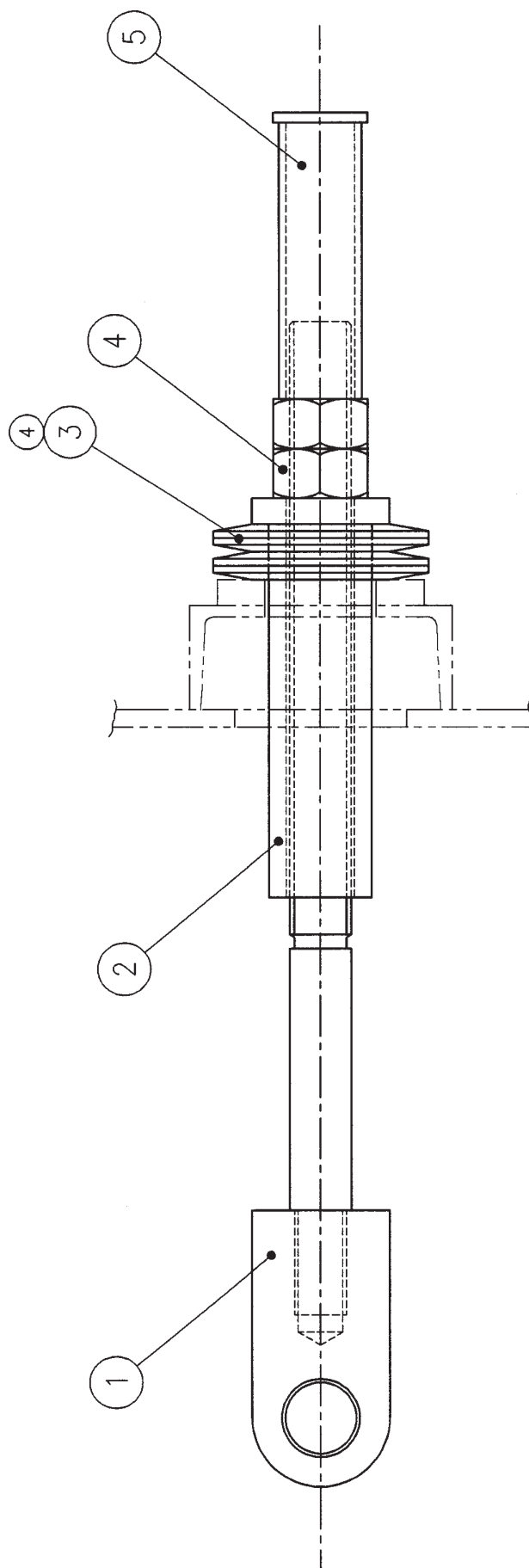


Impact Crusher - Front Apron Adjustment Mechanism

REF	PART NUMBER	DESCRIPTION	QUANTITY
1	A6984/12	ADJUSTING ROD	1
2	A6984/37	ADJUSTING BOLT SLEEVE	4
3	2436-9144	DISC SPRING	4
4	2215-0024	ADJUSTING NUT	1
5	A6984/84	LOCKNUT (WITH PROTECTIVE SLEEVE AND CHAIN)	1

A6984/35_00 – 26/-9/03

NB. THERE ARE 2 OF THE ABOVE MECHANISMS ON THE 428 IMPACTOR



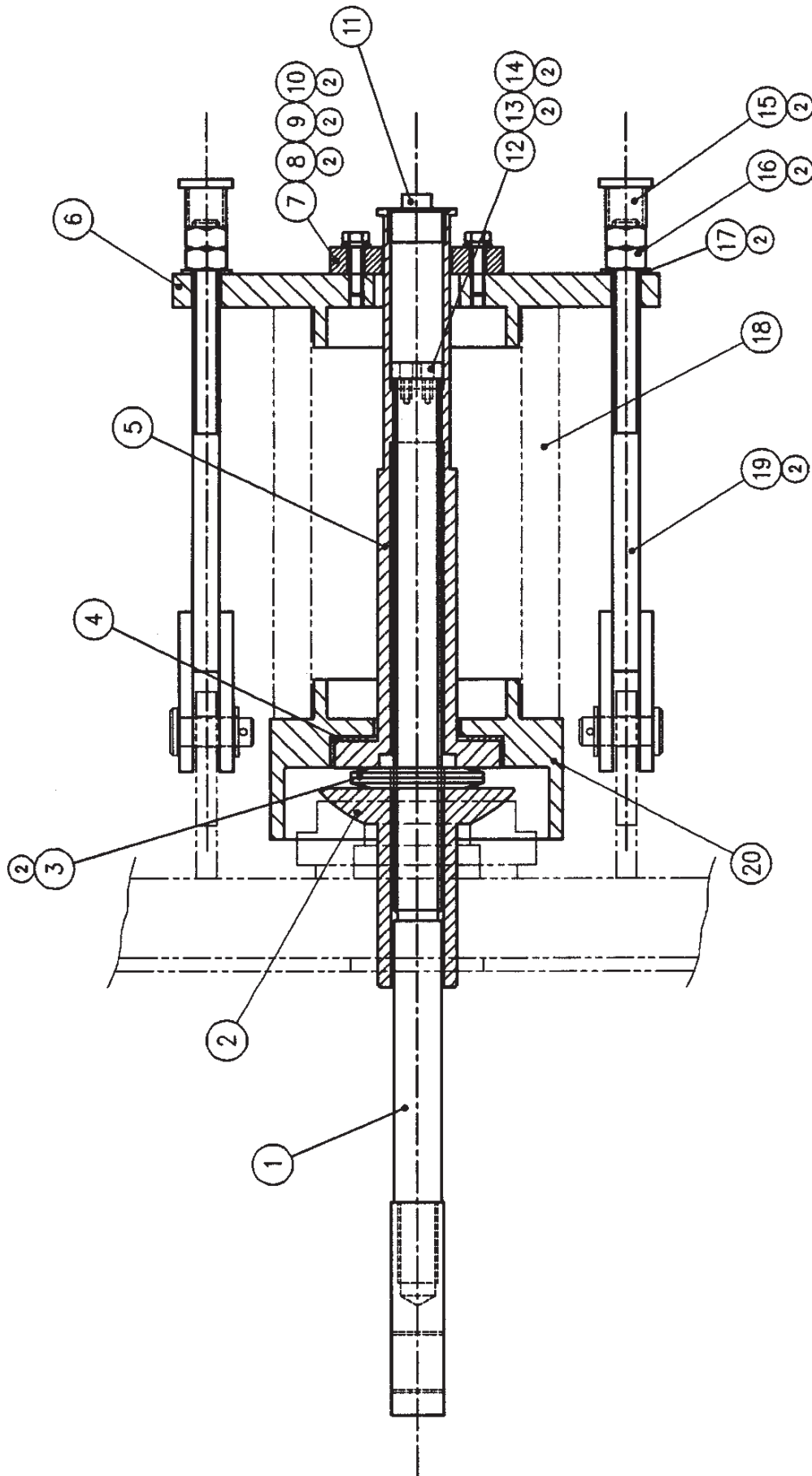
428 Impact Crusher - Front Apron Adjustment Mechanism

Impact Crusher - Rear Apron Adjustment Mechanism

REF	PART NUMBER	DESCRIPTION	QUANTITY
1	A6984/11/1	ADJUSTING ROD	1
2	A6984/38	FABRICATED SEAT-REAR	1
3	2436-9131	DISC SPRING	2
4	IA6984/71	THRUST WASHER	1
5	A6984/10	SLEEVE	1
6	A6984/13	SPRING CAP	1
7	A6984/141	KEEP PLATE	1
8	2210-0016	WASHER	2
9	2211-0007	SPRING WASHER	2
10	2232-1099	BOLT	2
11	A6984/136	HOLLOW PLUG	1
12	A6984/11/2	END CAP	1
13	2211-0006	SPRING WASHER	2
14	2222-0118	CAPSCREW	2
15	A6984/143	PROTECTION CAP WITH CHAIN	2
16	2215-0018	NUT	2
17	2210-0021	WASHER	2
18	IM 029H 4228	SPRING	1
19	A6984/40	TENSION ROD	2
20	A6984/41	SPRING SUPPORT	1

A6984/36_06 – 01/12/04

NB. THERE ARE 2 OF THE ABOVE MECHANISMS ON THE 428 IMPACTOR

**428 Impact Crusher - Rear Impact Apron Adjustment**

Impact Crusher - Grinding Path - Swing Beam Adjustment Mechanism

REF	PART NUMBER	DESCRIPTION	QUANTITY
1	A6984/47/1	SWING BEAM - ADJUSTING ROD	1
2	2215-0018	NUT	4
3	2210-0021	WASHER	4
4	2436-9131	DISC SPRING	4
5	A6984/71	THRUST WASHER	1
6	A6984/10	SLEEVE	1
7	A6984/13	SPRING CAP	1
8	A6984/86	KEEP PLATE	1
9	2210-0016	WASHER - PLAIN	2
10	2211-0007	WASHER - SPRING	2
11	2230-1153	SCREW	2
12	2510-3836	HOLLOW PLUG	1
13	A6984/47/2	END CAP	1
14	2211-0006	WASHER - SPRING`	2
15	2222-0118	CAPSCREW	2
16	A6984/39	PROTECTION CAP	2
17	IM.030H.4228	SPRING	1
18	A6984/49	TENSION ROD	2
19	A6984/48	SPRING SUPPORT	1

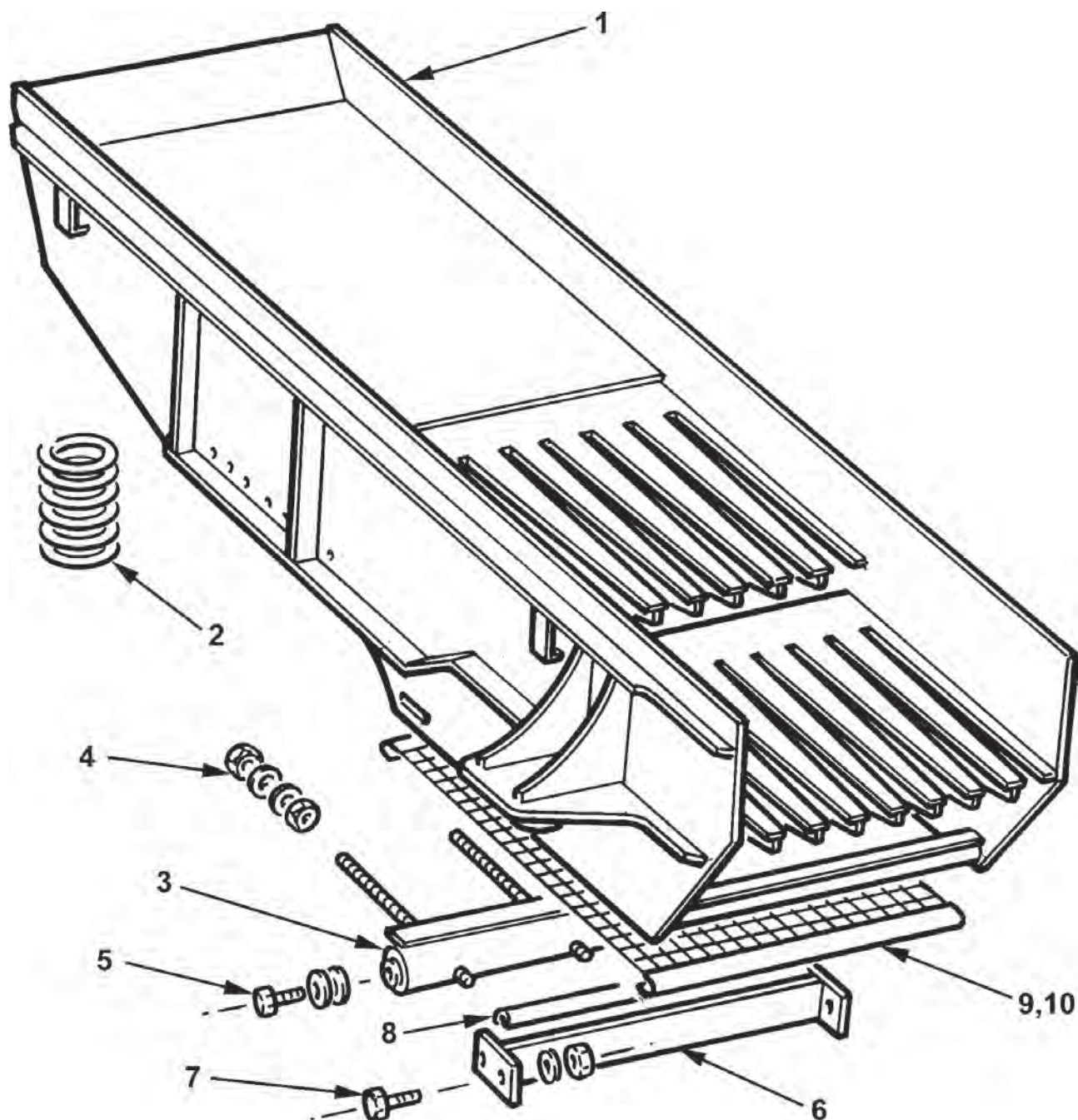
A6984/46_04 – 26/09/03

10.2 Feeder Parts

Grizzly Feeder - Mainframe assembly

REF	PART NUMBER	DESCRIPTION	QUANTITY
1	620/541	MAINFRAME	1
2	301/13	SPRING (FEED END)	4
	301/13	SPRING (DISCHARGE END)	4
3	620/514	MESH TENSIONER	1
4	2215-3018	NUT	8
	2211-0021	WASHER	8
	2210-0012	WASHER	8
5	2230-1290	SCREW	2
	2210-0021	WASHER	2
	2211-0012	SPRING WASHER	2
6	620/515	MESH SUPPORT	1
7	2236-4203	BOLT WITH NUT	4
	2212-2005	WASHER	4
8	2315/0005	SCREEN CAPPING RUBBER	1.2M
9	620/516	TENSIONED RUBBER MAT	1
10	432/1	TENSIONED WIRE MESH 10MM	1
	432/2	TENSIONED WIRE MESH 20MM	1
	432/3	TENSIONED WIRE MESH 30MM	1
	432/4	TENSIONED WIRE MESH 40MM	1
	432/5	TENSIONED WIRE MESH 50MM	1

04/11/03

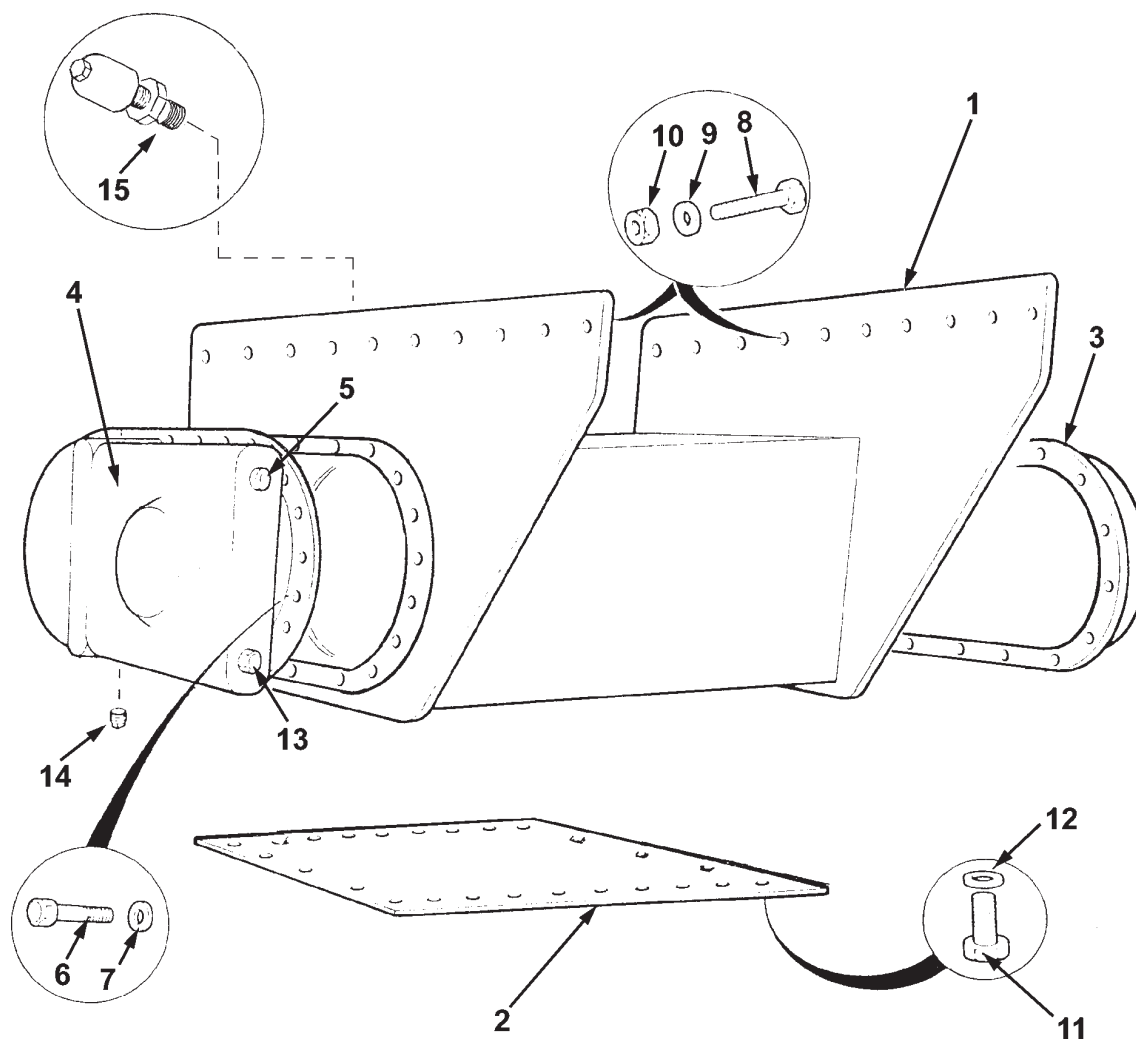


Feeder Mainframe Assembly - 428 Trakpactor

Grizzly Feeder - Vibrating Unit Assembly

REF	PART NUMBER	DESCRIPTION	QUANTITY
1	629/269	UNIT HOUSING	1
2	629/151	COVER PLATE	1
3	629/47	END COVER (GEAR)	1
4	629/160	END COVER (DRIVE)	1
5	2510-3864	PLUG	2
6	2230-1122	SCREW	48
7	2211-0007	WASHER	48
8	2236-4278	BOLT WITH NUT	20
9	2212-2006	WASHER	20
10		NUT (SUPPLIED WITH ITEM 8)	20
11	2230-1152	SCREW	20
	2230-1153	SCREW (FOUR CORNER SCREWS)	4
12	2211-0017	WASHER	24
13	2538-5152	OIL LEVEL GLASS	2
14	2510-9848	MAGNETIC PLUG	2
	2510-4574	REDUCING BUSH	2
15	2531-1021	BREATHER	1
	2141-0027	LOCTITE GASKET COMPOUND 160ML (FOR SEALING END PLATES AND COVER PLATES)	1

23/11/04



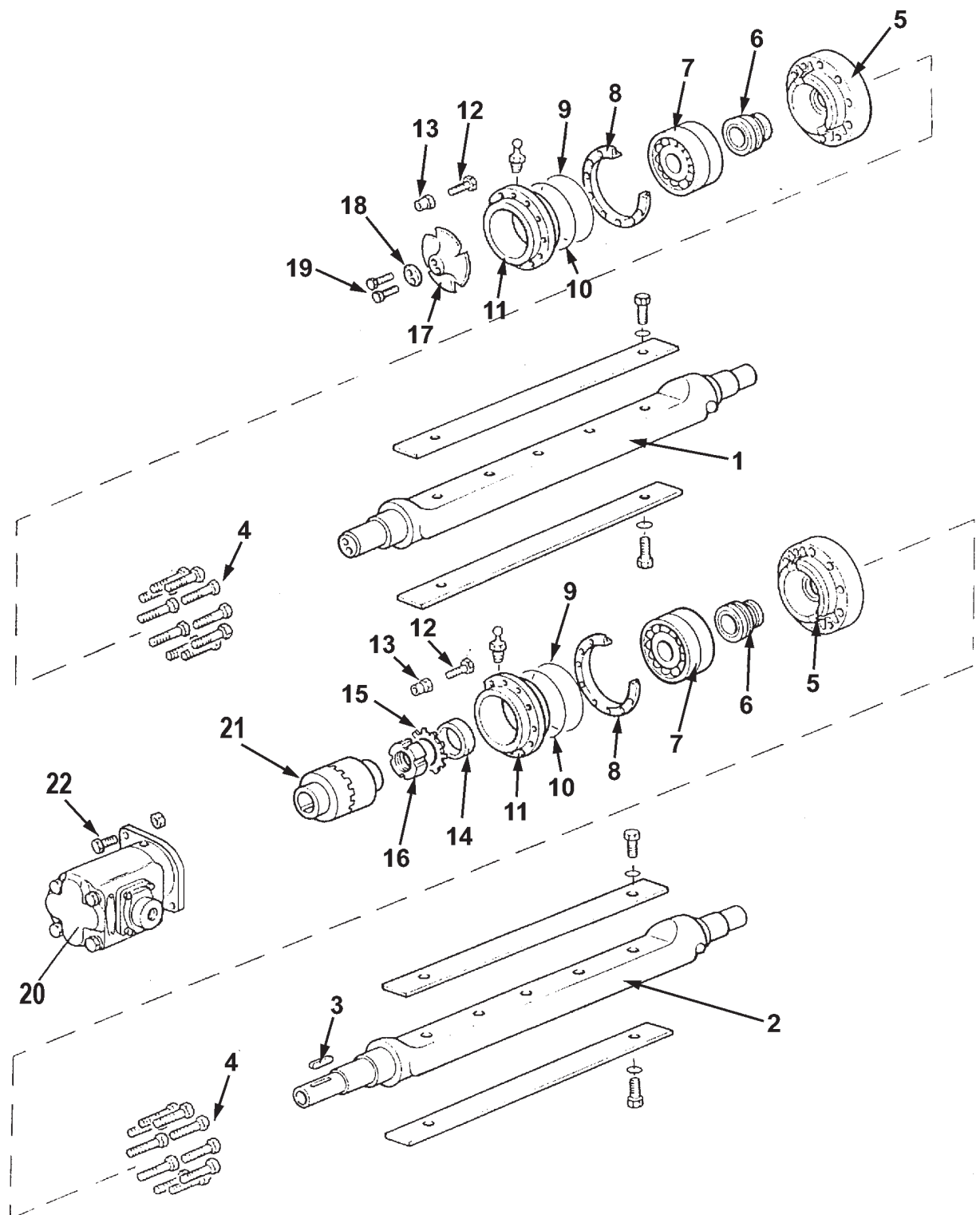
Feeder Vibrating Unit Housing - 428 Trakpactor

Grizzly Feeder - Driveside Shaft Assembly

REF	PART NUMBER	DESCRIPTION	QUANTITY
1	629/154	DRIVEN SHAFT	1
2	629/155	DRIVE SHAFT	1
3	331/58	KEY	1
4	325/45	BOLT	16
5	629/153	BEARING HOUSING	2
6	629/157	BEARING SPACER	2
7	2416-1909	BEARING	2
8	629/159	LOCKING RING	2
9	629/162	'O' RING INNER	2
10	629/163	'O' RING OUTER	2
11	629/156	BEARING CAP	2
12	2232-1279	BOLT	20
13	2217-0009	NUT	20
14	310/28	WASHER	1
15	2212-8014	LOCKWASHER	1
16	2217-7014	LOCKNUT	1
17	629/9	OIL FLINGER	1
18	18HS39	RETAINING WASHER	1
19	325/20	SCREW	2
20	2576-4087	HYDRAULIC MOTOR	1
21	629/174	MOTOR COUPLING	1
22	326/11	BOLT	4
	2217-0005	NUT	4
	2210-0017	WASHER	4

04/11/03

SEE SECTION 10.2.4 FOR THE DRIVESIDE SHAFT COMPONENTS.



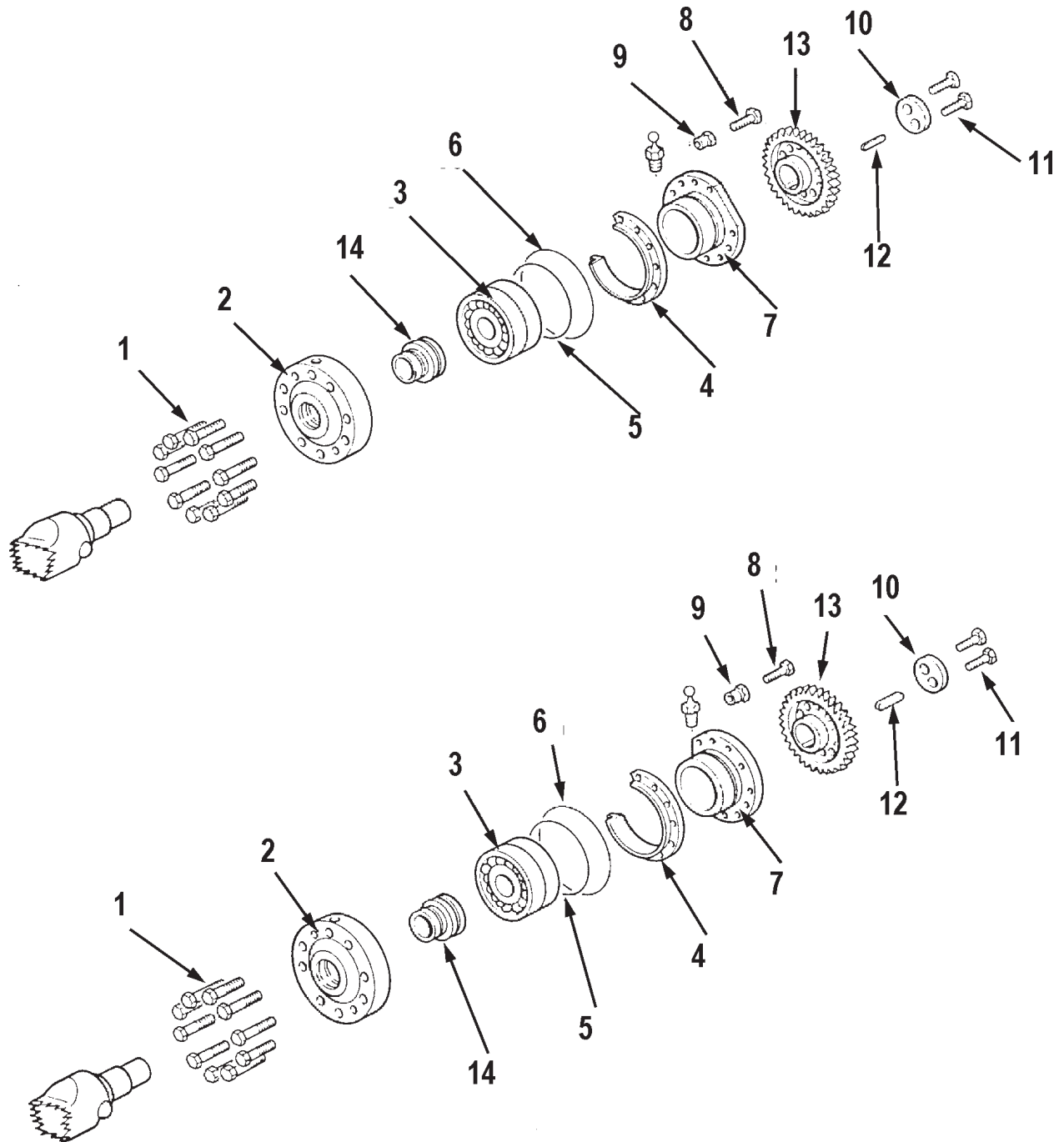
Feeder Driveside Shaft Assembly - 428 Trakpactor

Grizzly Feeder - Non Driveside Shaft Assembly

REF	PART NUMBER	DESCRIPTION	QUANTITY
1	325/45	BOLT	16
2	629/153	BEARING HOUSING	2
3	2416-1909	BEARING	2
4	629/159	LOCKING RING	2
5	629/162	'O' RING INNER	2
6	629/163	'O' RING OUTER	2
7	629/156	BEARING CAP	2
	2510-3864	PLUG	2
8	2232-1279	BOLT	20
9	2217-0009	NUT	20
10	18HS39	RETAINING WASHER	2
11	325/20	SCREW	4
12	18HS50	KEY (SPUR GEAR)	2
13	18HS54	DRIVE GEAR	2
14	629/158	BEARING SPACER	2

04/11/03

SEE SECTION 10.2.3 FOR THE DRIVESIDE SHAFT COMPONENTS.



Feeder Non Driveside Shaft Assembly- 428 Trakpactor

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10.3 Conveyor Parts

Product Conveyor - Conveyor Parts Assembly - sheet 1

REF	PART NUMBER	DESCRIPTION	QUANTITY
1	AX789/117	HEAD DRUM	1
2	2421-0014S	PLUMMER BLOCK BEARING	2
	2530-2008	REMOTE GREASE PIPING (PART OF KIT FOR HEADSHAFT BEARINGS ONLY)	1
3	2450-5505	SHRINK DISC COUPLING	1
	AX862/92	COUPLING GUARD	1
4	AX789/38	TORQUE ARM	1
5	2476-4075	HYDRAULIC MOTOR	1
6	AX789/24/4	BELT SCRAPER	1
7	AX789/24/2	BELT SCRAPER CLAMP	1
8	AX789/24/3	BELT SCRAPER BRACKET	1
9	AX789/24/1	ROSTA UNIT SUPPORT LH	1
10	AX789/24/1A	ROSTA UNIT SUPPORT RH	1
11	AX607/3/46	ROSTA TENSIONING UNIT	2
12	AX815/54/1	TELESCOPER UNIT	1
13	AX846/118/1	CONVEYOR STRINGER FRAME	1
14	AX846/118/2	REMOVABLE ROLLER X MEMBER	1
15	AX815/142	CONVEYOR RETURN IDLER BRACKET	2
16	AX846/119	SPIRAL ROLLER NIP GUARD	1
17	AX815/167	SPIRAL ROLLER NIP GUARD	2
18	AX860/99	HEAD DRUM NIP GUARD	1
19	2495-1130A	RETURN IDLER	1
20	AX860/128	PLAIN ROLLER NIP GUARD	1
21	2495-3001	MULTI TROUGH IDLER SET COMPLETE	4
22	AX846/14/2	CONVEYOR PIN (HEAD TO CHASSIS)	2
23	AX846/74/1	CONVEYOR HEAD GUARD	1
24	AX846/74/2	CONVEYOR HEAD GUARD	1
25	AX846/75/1	CONVEYOR UPPER GUARD	1
26	AX846/75/2	CONVEYOR UPPER GUARD	1
27	AX843/39/1	CONVEYOR MIDDLE GUARD	1
28	AX843/39/2	CONVEYOR MIDDLE GUARD	1
29	AX843/40/1	CONVEYOR LOWER GUARD	1
30	AX843/40/2	CONVEYOR LOWER GUARD	1
31	AX846/77	WIND COVER SUPPORT	4
32	AX846/10	CANVAS WIND COVER (NOT APPLICABLE FOR PLANT FITTED WITH MAGNETIC SEPARATOR - SEE SEPARATE PAGE)	1
33	AX843/22	SUPPORT WIRE ROPE	2
34	2495-3000	MULTI TROUGH IDLER SET COMPLETE	3

AX846/121 iss. 02mod sht 1 – 01/12/04

NB. Fixings are not included with the above parts unless specifically ordered

AX846-901-8EN-02a 235/300

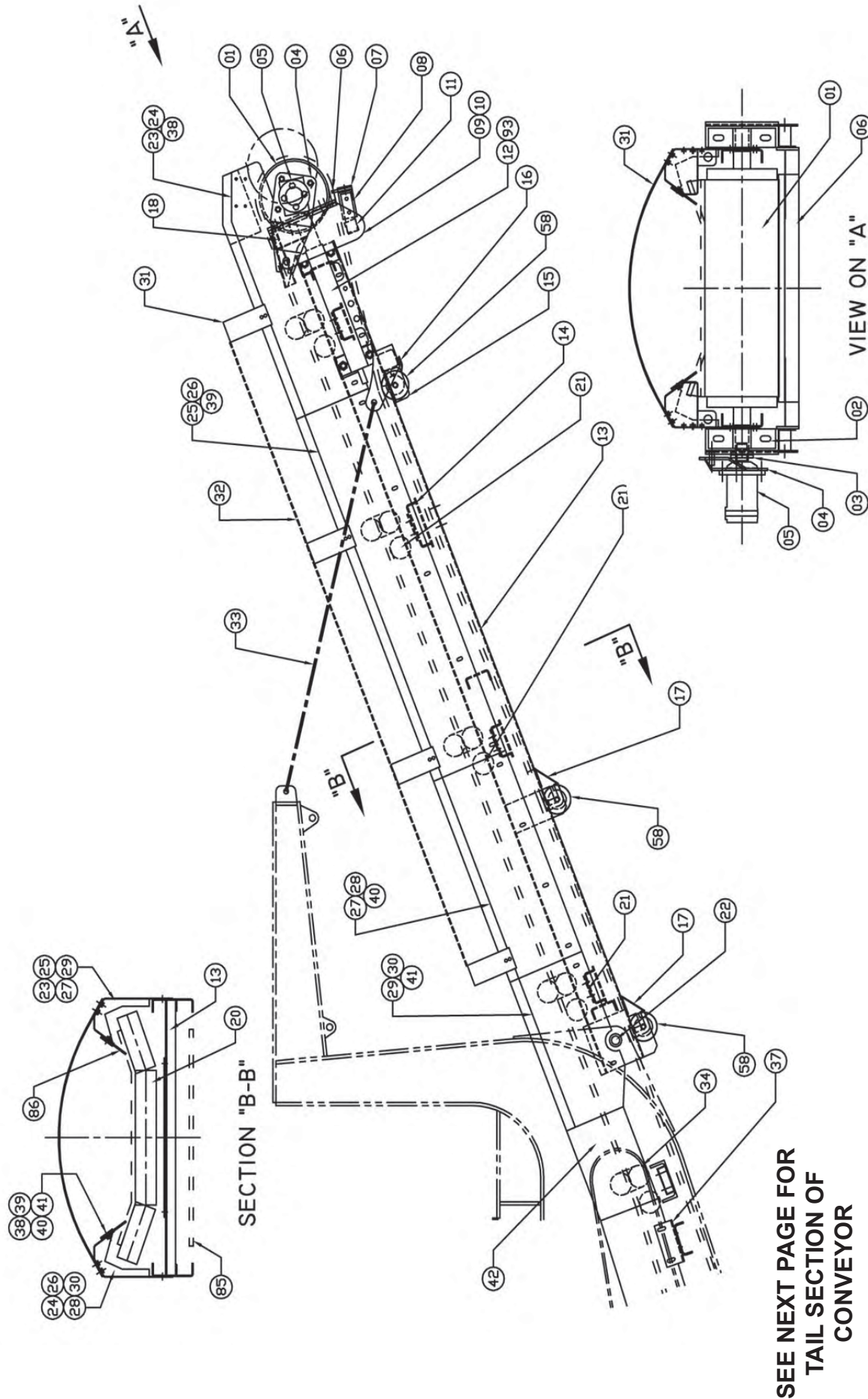
Product Conveyor - Conveyor Parts Assembly - sheet 2

REF	PART NUMBER	DESCRIPTION	QUANTITY
34A	2489-1055	SEPARATE OUTER ROLLER FOR ITEM 34	6
34B	2489-3005	CLAMP WITH FIXINGS FOR ITEM 34A	6
34C	2489-1056	SEPARATE CENTRE ROLLER FOR ITEM 34	3
34D		SEPARATE BASEPLATE FOR ITEM 34	3
35	AX843/45/1	GUARD INSIDE CHASSIS	1
36	AX843/45/2	GUARD INSIDE CHASSIS	1
37	AX843/45/3	GUARD MOUNTING BRACKET	4
38	AX843/47/1	CLAMPING STRIP	2
39	AX843/47/2	CLAMPING STRIP	2
40	AX843/47/3	CLAMPING STRIP	2
41	AX843/47/4	CLAMPING STRIP	2
42	AX843/47/5	CLAMPING STRIP	2
43	AX843/47/6	CLAMPING STRIP	2
44	AX843/47/7	CLAMPING STRIP	2
45	AX843/18	IMPACT BAR CRADLE FRAME	1
46	AX846/38	IMPACT BAR, 620 MM LONG	6
47	AX843/62	RUBBER CURTAIN	1
48	AX843/55/1	RUBBER CURTAIN SUPPORT BRACKET	1
49	AX843/55/2	RUBBER CURTAIN CLAMPING STRIP	1
50	AX846/4	TAIL CONVEYOR FRAME	1
51	AX846/14/1	PIN, (TAIL TO CHASSIS)	2
52	AX846/14/3	PIN, TAIL (TO STRUT)	2
53	AX846/15	TAIL STRUT	2
54	AX846/14/4	PIN, (STRUT TO TAIL)	2
55	AX843/15/1	SCRAPER BLADE FRAME	1
56	AX843/15/2	SCRAPER BLADE	1
57	AX843/15/3	SCRAPER BLADE CLAMP	2
58	2495-3003	SPIRAL RETURN ROLLER	4
59	2495-3002	MULTI TROUGH IMPACT IDLER COMPLETE	1
59A	2489-1057	SEPARATE OUTER ROLLER FOR ITEM 59	2
59B	2489-3005	CLAMP WITH FIXINGS FOR ITEM 59A	2
59C	2489-1058	SEPARATE CENTRE ROLLER FOR ITEM 59	1
59D		SEPARATE BASEPLATE FOR ITEM 59	1
60	2421-0011S	PLUMMER BLOCK BEARING	2

AX846/121 iss 02 sht 2 - 041203

NB. Fixings are not included with the above parts unless specifically ordered

AX846-901-8EN-02a 236/300



Product Conveyor Head Section - Conveyor Parts Assembly - 428 Trakpactor

Product Conveyor - Conveyor Parts Assembly - sheet 3

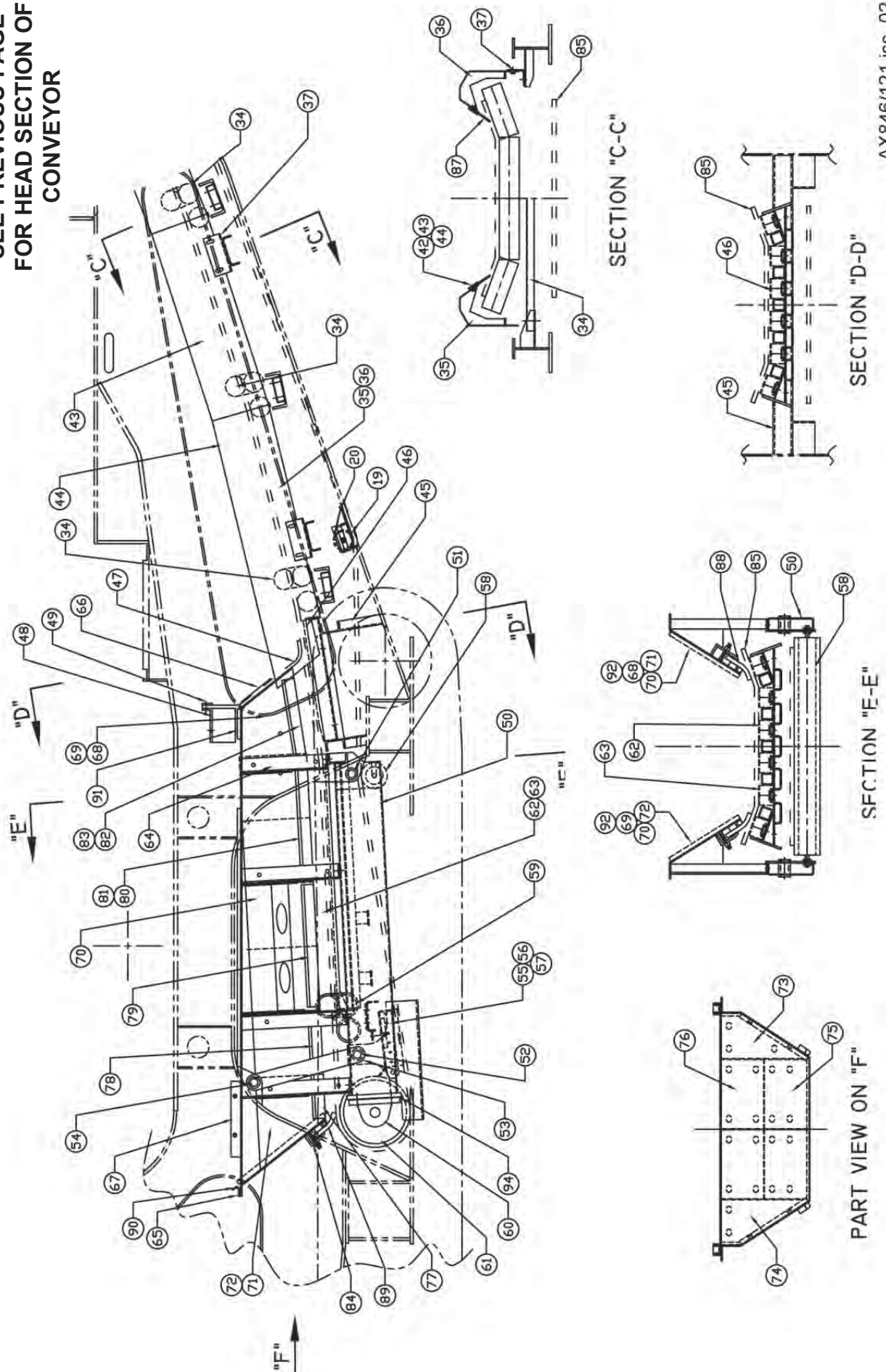
REF	PART NUMBER	DESCRIPTION	QUANTITY
	2530-2008	REMOTE GREASE PIPING (PART OF KIT FOR TAILSHAFT BEARINGS ONLY)	1
61	AX843/7	TAIL DRUM	1
62	AX846/36	IMPACT BAR, 1240 MM LONG	2
63	AX846/37	IMPACT BAR, 1130 MM LONG	4
64	AX846/41/1	FEED BOOT	1
65	AX846/41/2	FEED BOOT REAR CLAMPING STRIP	1
66	AX846/41/3	FEED BOOT FRONT CLAMPING STRIP	2
67	AX846/41/4	FEED BOOT SIDE CLAMPING STRIP	2
68	AX843/13/1	FEED BOOT LINER PLATE	1
69	AX843/13/2	FEED BOOT LINER PLATE	1
70	AX843/13/3	FEED BOOT LINER PLATE	8
71	AX843/13/4	FEED BOOT LINER PLATE	1
72	AX843/13/5	FEED BOOT LINER PLATE	1
73	AX843/13/6	FEED BOOT LINER PLATE	1
74	AX843/13/7	FEED BOOT LINER PLATE	1
75	AX843/13/8	FEED BOOT LINER PLATE	2
76	AX843/13/9	FEED BOOT LINER PLATE	2
77	AX843/30/1	FEED BOOT CLAMP PLATE	2
78	AX843/30/2	FEED BOOT CLAMP PLATE	2
79	AX843/30/3	FEED BOOT CLAMP PLATE	2
80	AX843/30/4	FEED BOOT CLAMP PLATE	1
81	AX843/30/5	FEED BOOT CLAMP PLATE	1
82	AX843/30/6	FEED BOOT CLAMP PLATE	1
83	AX843/30/7	FEED BOOT CLAMP PLATE	1
84	AX846/80	FEED BOOT CLAMP PLATE	1
85	2360-0052	CONVEYOR BELT (2360-0152 FOR CONTI BELT)	1
86	AX846/30/1	SKIRT RUBBER TOP CONVEYOR	2
87	AX846/30/3	SKIRT RUBBER LOWER CONVEYOR	2
88	AX846/81/1	SKIRT RUBBER FEED BOOT	2
89	AX846/81/2	SKIRT RUBBER FEED BOOT	1
90	AX846/33	RUBBER DUST STRIP	1
91	AX846/41/5	BOLT ON SPACER	2
92	AX843/13/10	FEED BOOT LINER	2
93	AX815/54/1X	TELESCOPER UNIT	1
94	AX846/120	BEARING SHIM	4

AX846/121 iss 02 sht 3 - 041203

NB. Fixings are not included with the above parts unless specifically ordered

AX846-901-8EN-02a 238/300

SEE PREVIOUS PAGE
FOR HEAD SECTION OF
CONVEYOR



AX846/121 iss. 02

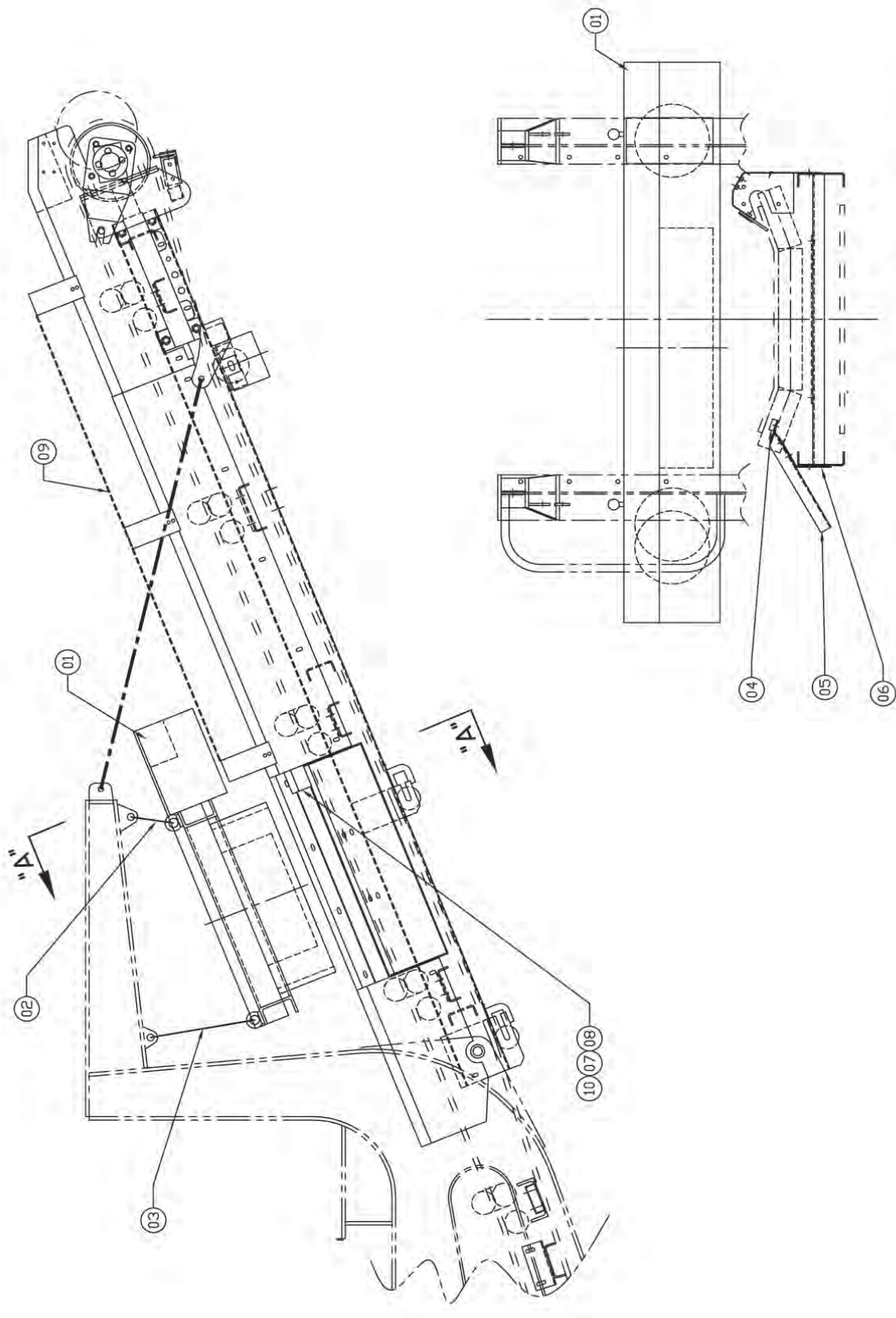
Product Conveyor Tail Section - Conveyor Parts Assembly - 428 Trakpactor

Product Conveyor with Magnetic Separator fitted

REF	PART NUMBER	DESCRIPTION	QUANTITY
1	AX846/126	MAGNETIC SEPARATOR	1
2	AX818/62/1	'D' SHACKLE	2
3	AX818/62/2	'D' SHACKLES AND CHAIN	4
4	AX818/121	BACKING STRIP	1
5	AX818/33/1	SHEDDER PLATE	1
6	AX818/33/2	SHEDDER PLATE BRACKET	1
7	AX843/56/1	DEFLECTOR BRACKET	1
8	AX843/56/2	DEFLECTOR BRACKET CLAMP PLATE	1
9	AX846/76	CANVAS WIND COVER	1
10	AX846/30/2	UPPER SKIRT (MAGNET)	1

AX846/25 iss 04 – 01/12/04

NB. Fixings are not included with the above parts unless specifically ordered



Product Conveyor with Magnetic Separator fitted - 428 Trakpactor

Dirt Conveyor - Conveyor Parts Assembly - sheet 1

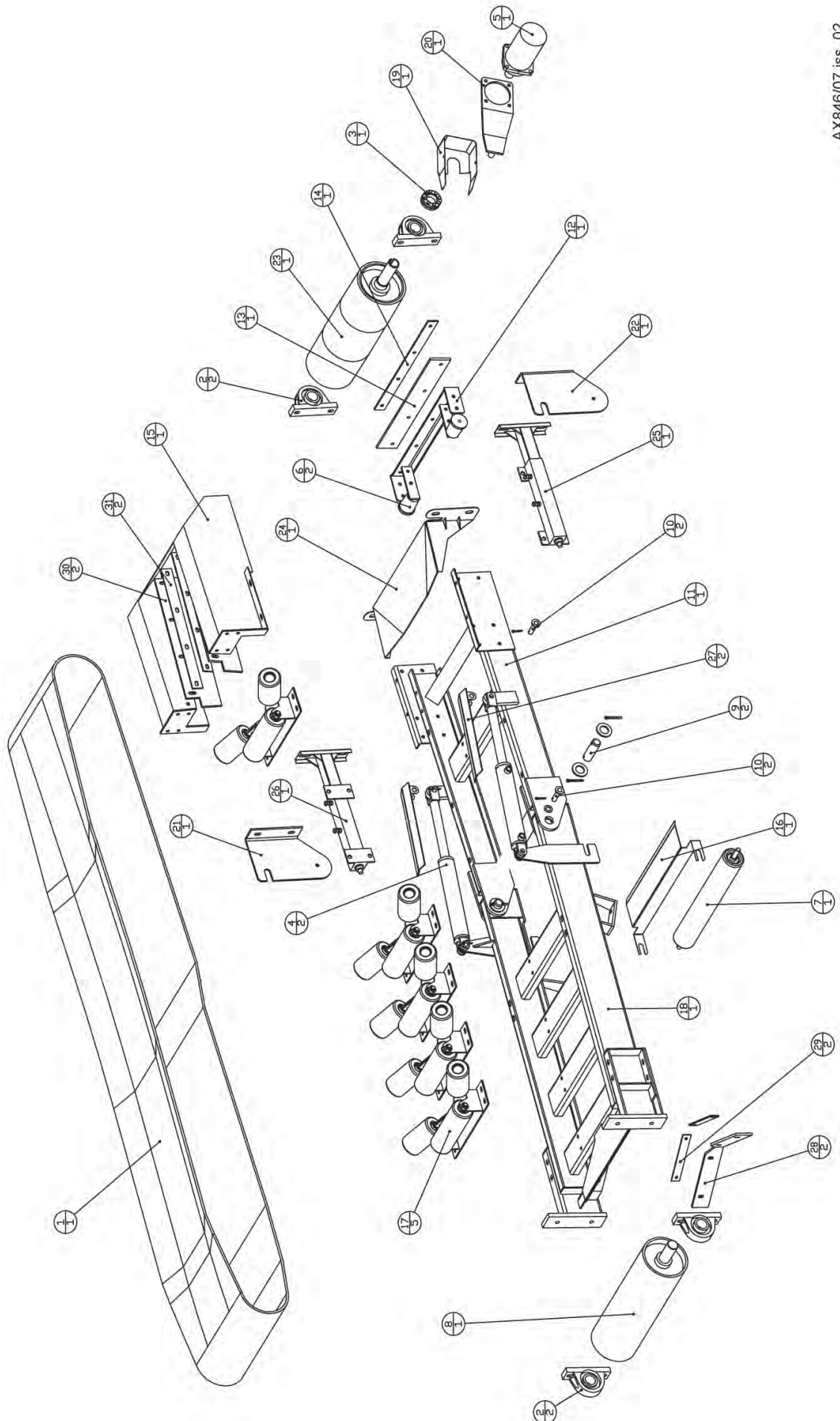
REF	PART NUMBER	DESCRIPTION	QUANTITY
1	2360-0062	CONVEYOR BELT	1
2	2421-0010S	BEARING	2
	2530-2007	REMOTE GREASING KIT FOR BOTH TAILSHAFT BEARINGS	1
3	2450-5503	SHRINK DISC	1
4	2564-5015	HYDRAULIC CYLINDER	2
5	2576-4078	HYDRAULIC MOTOR	1
6	AX607/3/46	TENSIONING ELEMENT	2
7	AX607/658/3	RETURN IDLER	1
8	AX789/13	TAIL DRUM	1
9	AX789/30/2	PIVOT PIN	2
10	AX789/30/3	PIVOT PIN	4
11	AX789/32	HEAD FRAME	1
12	AX789/39/01	SCRAPER BLADE FRAME	1
13	AX789/39/2	SCRAPER BLADE	1
14	AX789/39/3	SCAPER BLADE CLAMP STRIP	1
15	AX789/45/1	HEAD COVER	1
16	AX815/6	NIP GUARD	1
17	AX815/31	TROUGHING IDLER	5
18	AX815/81	TAIL FRAME	1
19	AX815/82/1	COUPLING GUARD RH	1
20	AX815/90	TORQUE ARM	1
21	AX815/91/1	ROSTA UNIT SUPPORT LH	1
22	AX815/91/2	ROSTA UNIT SUPPORT RH	1
23	AX815/92	HEAD DRUM	1
24	AX815/120	HEAD DRUM NIP GUARD	1
25	AX818/110/1	TELESCOPER	1
26	AX818/110/1X	TELESCOPER	1
27	AX833/15	CYLINDER PROTECTION COVER	2
28	AX862/244/1	POLYURETHANE BLADE	2
29	AX862/244/2	CLAMP	2
30	AX842/107/1	HEAD COVER SKIRT RUBBER	2
31	AX842/107/2	HEAD COVER CLAMP PLATE	2

AX846/07 iss 02 – 01/12/04

NB. Fixings are not included with the above parts unless specifically ordered

AX846-901-8EN-02a 242/300

AX846/07 iss. 02

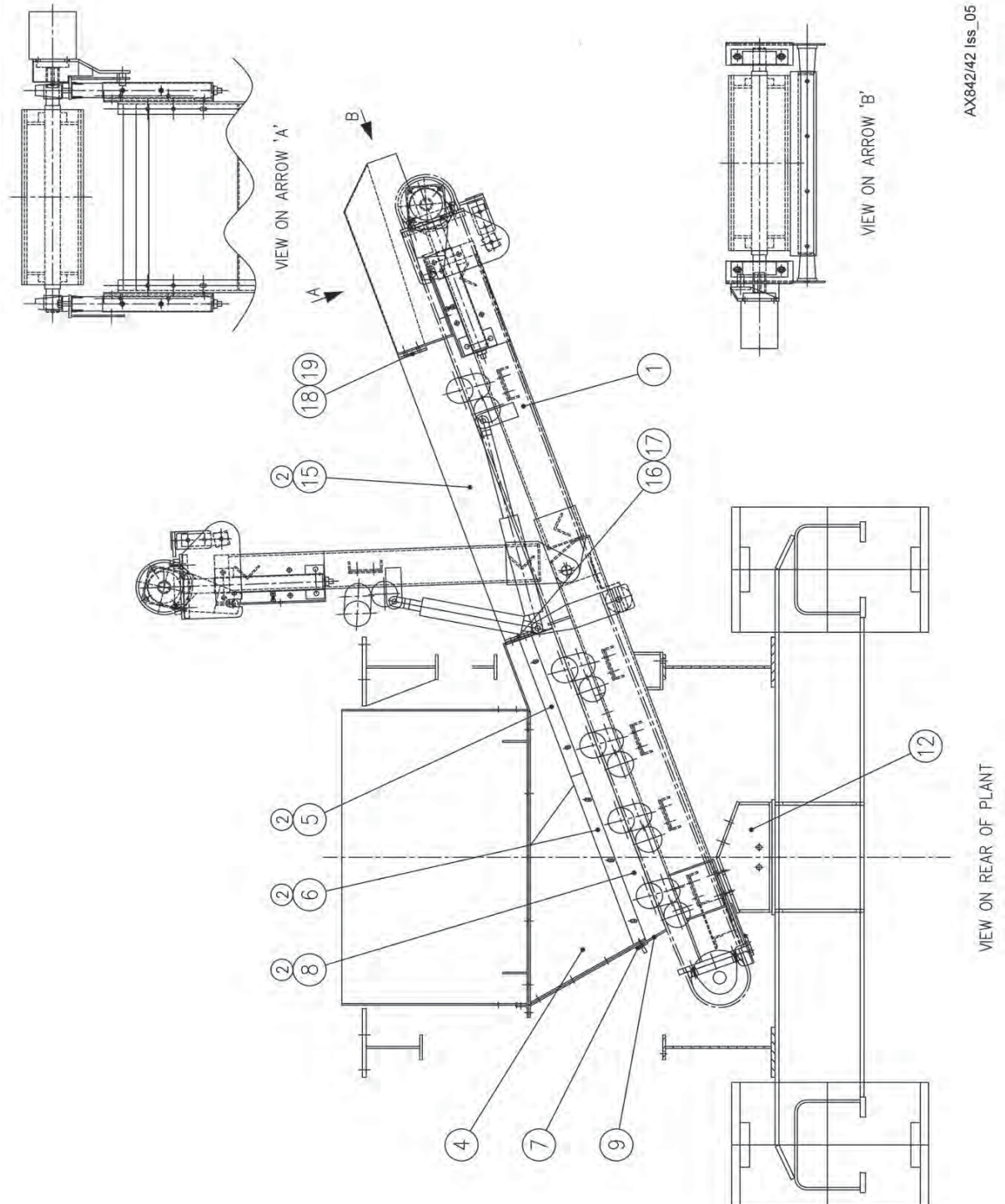


Dirt Conveyor - Conveyor Parts Assembly - 428 Trakpactor

Dirt Conveyor - Conveyor Parts Assembly - sheet 2

REF	PART NUMBER	DESCRIPTION	QUANTITY
1	AX846/7	ASSEMBLY OF 600MM WIDE DIRT CONVEYOR	1
2			
3			
4	AX846/5/1	FEED BOOT	1
5	AX846/5/2	FEED BOOT CLAMP	2
6	AX846/5/3	FEED BOOT CLAMP	2
7	AX846/5/4	FEED BOOT CLAMP	1
8	AX846/32/1	SIDE SKIRT	2
9	AX846/32/2	REAR SKIRT	1
10			
11			
12	AX843/21	DIRT CONVEYOR SUPPORT	1
13			
14			
15	AX815/75	SKIRT RUBBER	2
16	AX815/76/1	CLAMP PLATE	1
17	AX815/76/2	CLAMP PLATE	1
18	AX815/76/3	CLAMP PLATE	1
19	AX815/76/4	CLAMP PLATE	1
20			

AX846/42 iss 05 – 04/12/03



AX842/42 Iss_05

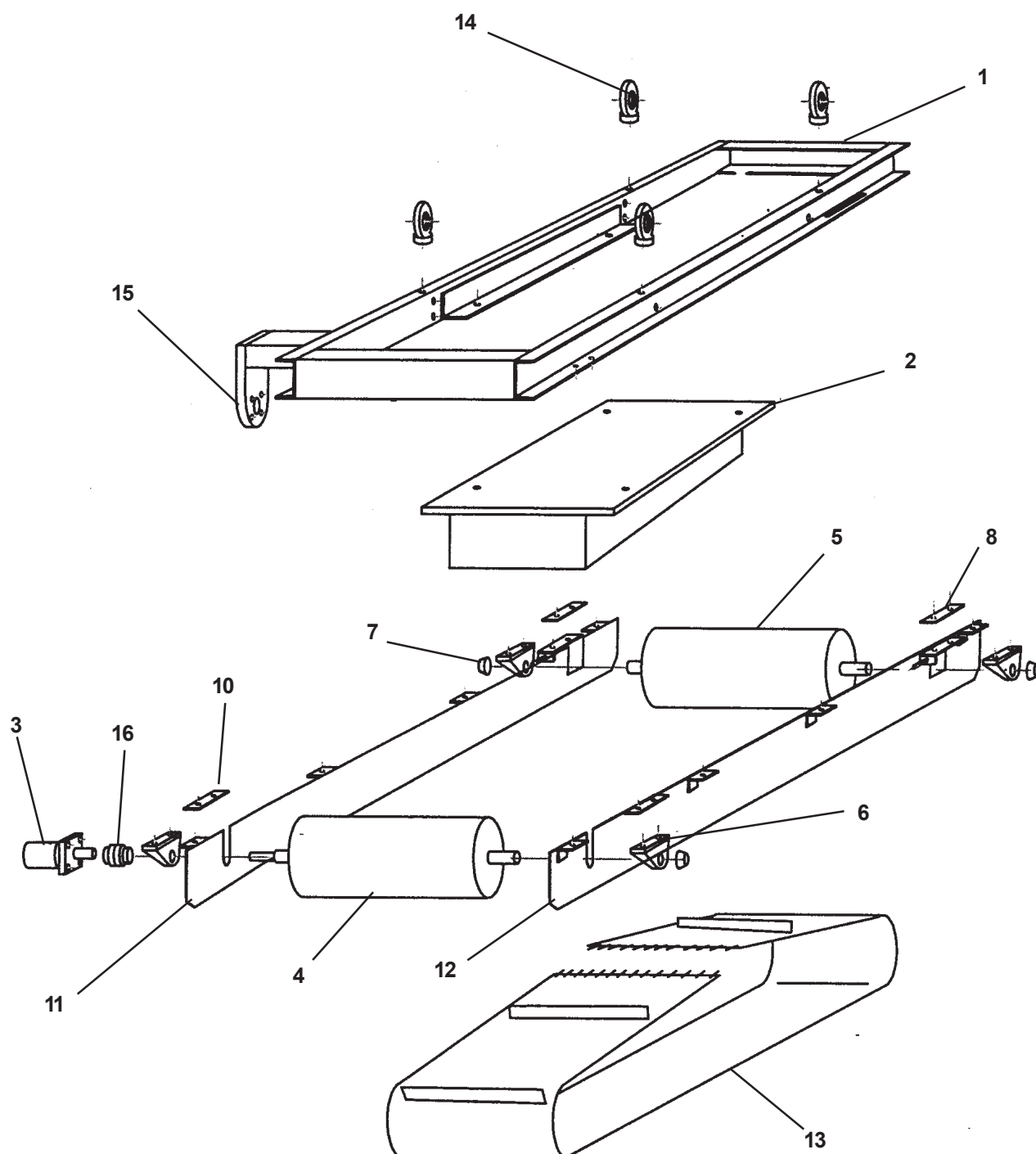
Dirt Conveyor - Conveyor Parts Assembly, continued - 428 Trakpactor

10.4 Overband Magnetic Separator

REF	PART NUMBER	DESCRIPTION	QUANTITY
	AX846/126	MAGNETIC SEPARATOR - COMPLETE UNIT	
1		FRAME	1
2		MAGNET	1
3		HYDRAULIC MOTOR	1
4		DRIVE PULLEY	1
5		NON-DRIVE PULLEY	1
6		BEARING	4
7		BEARING CAP	3
8		BEARING BACK PLATE	2
9		BEARING TAKE-UP PLATE	2
10		BEARING SPACER PLATE	2
11		SIDE PLATE LEFT HAND	1
12		SIDE PLATE RIGHT HAND	1
13		BELT	1
14		EYENUT	4
15		MOTOR MOUNTING PLATE	1
16		COUPLING ASSEMBLY	1

05/12/03

NB. Fixings are not included with the above parts unless specifically ordered



Overband Magnetic Separator- 428 Trakpactor

10.5 Plant Component Parts

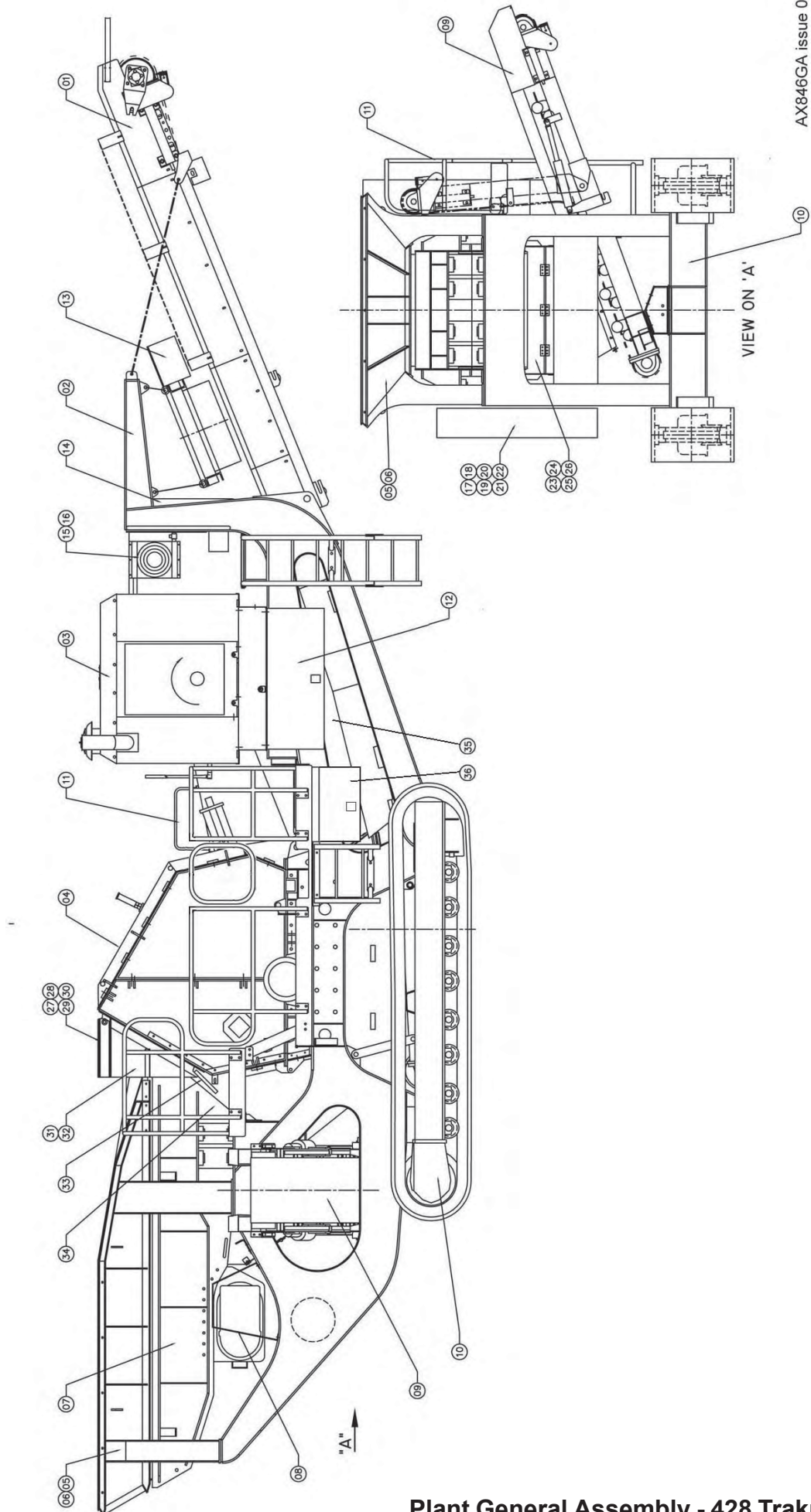
Plant General Arrangement

REF	PART NUMBER	DESCRIPTION	QUANTITY
1	AX846/121	PRODUCT CONVEYOR ASSEMBLY	1
2	AX846/1	PLANT CHASSIS	1
3	2480-0054	CATERPILLAR ENGINE POWER PACK	1
4	A6984	42 x 48 IMPACT CRUSHER	1
5	AX846/72	FEED HOPPER ASSEMBLY	1
6	AX846/24	FEED HOPPER LINER PLATES	1 SET
7	620/B52/428T	3800 x 1080 VIBRATING GRIZZLY FEEDER	1
8	AX843/52	VGF MOTOR GUARD	1
9	AX846/42	SIDE DIRT CONVEYOR ASSEMBLY	1
10	AX846/13	CROSS BEAM ASSEMBLY	1
11	AX846/27	WALKWAYS AND LADDERS ASSEMBLY	1
12	AX815-217-501	CONTROL CABINET LESS INNER PANEL	1
	AX815-217-003	CONTROL CABINET INNER PANEL	1
	AX815-217-502	CONTROL CABINET DOOR	1
	AX815-249-001	PLASTIC HINGE	1
	2301-0005	COMPRESSION LOCKING LATCH	1
	2563-0013	GAS STRUT	2
13	AX843MAG	OVERBAND MAGNETIC SEPARATOR ASSEMBLY	1
14	AX846-L675	HYDRAULIC OIL RESERVOIR	1
15	2592-2006	AIR BLAST OIL COOLER	1
16	AX846/92	OIL COOLER GUARD	1
17	AX846/106/1	CRUSHER DRIVE GUARD	1
18	2443-1700	ENGINE PULLEY – 280 PCD	1
18	2443-1673	ENGINE PULLEY – 224 PCD	1
19	2443-8337	TAPER LOCK BUSH	1
20	AX846/113	CRUSHER PULLEY	1
21	2450-8060	PULLEY BUSH	1
22	2441-0482	DRIVE VEE BELTS	6
23	AX846/3	FINES CHUTE WITH CLAMP STRIPS	1
	AX846/35	CHUTE/FEEDER RUBBER CURTAIN	1
24	AX846/6/1	CHUTE BY-PASS DOOR	1
25	AX846/6/2	BY-PASS DOOR HANDLE	1
26	2424-5021	BY-PASS DOOR SPINDLE BEARING	2
27	AX843/43/1	CHAIN CURTAIN FRAME	1
28	2321-1107	CHAIN FOR CHAIN CURTAIN	13
29	AX843/61	RUBBER CURTAIN	1
30	AX843/43/2	RUBBER CHAIN CURTAIN CLAMP PLATE	1
31	AX846/128/1	CRUSHER FEED CHUTE	1
32	AX846/128/2	WEAR PLATE	1
	AX846/128/3	CLAMP PLATES	1 SET
	AX862/248/1	FEED CHUTE LID PIN	1
33	AX846/16	DEFLECTOR PLATE ASSEMBLY	1
34	AX843/58	SIDE RUBBER CURTAIN	2
35	AX846/70	SIDE RUBBER CURTAIN	2
36	AX846-133-501	TOOL BOX	1
	AX846-133-502	TOOL BOX DOOR ASSEMBLY	1
	2301-0005	COMPRESSION LOCKING LATCH	1
	AX815-253-001	PLASTIC HINGE	1
	AX846-133-CHAIN	CHAIN ASSEMBLY	2

AX846GA_mod_01/12/04

NB. Fixings are not included with the above parts unless specifically ordered

AX846-901-8EN-02a 248/300



AX846GA issue 02.mod

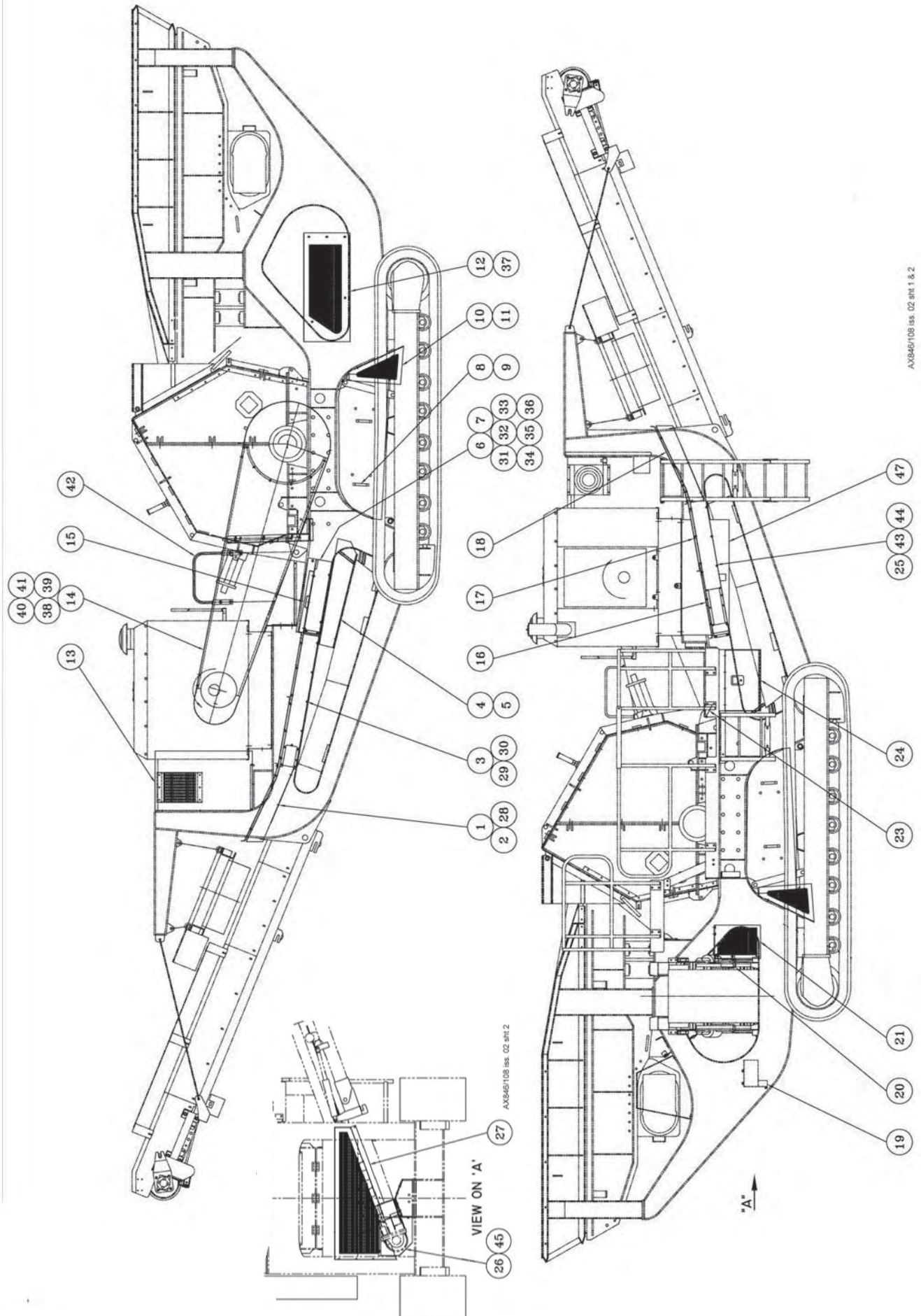
Plant General Assembly - 428 Trakpactor

Plant Guards Assembly

REF	PART NUMBER	DESCRIPTION	QUANTITY
1	AX846/101/1	TUNNEL THIRD SECTION – LH SIDE	1
2	AX846/101/2	TUNNEL THIRD SECTION – RH SIDE	1
3	AX846/99/1	TUNNEL SECOND SECTION	1
4	AX846/96/1	BARGE BOARD SIDE GUARD – RH SIDE	1
5	AX846/96/2	BARGE BOARD SIDE GUARD – LH SIDE	1
6	AX846/98/1	PRODUCT CONVEYOR TUNNEL – FIRST SECTION – RH SIDE	1
7	AX846/98/2	PRODUCT CONVEYOR TUNNEL – FIRST SECTION – LH SIDE	1
8	AX846/90/1	PRODUCT CONVEYOR SIDE GUARD – RH	1
9	AX846/90/2	PRODUCT CONVEYOR SIDE GUARD – LH	1
10	AX846/87/1	PRODUCT CONVEYOR TAIL DRUM GUARD – LH SIDE	1
11	AX846/87/2	PRODUCT CONVEYOR TAIL DRUM GUARD – RH SIDE	1
12	AX846/105/1	DIRT CONVEYOR TAIL SECTION SIDE GUARD	1
13	AX846/92	COOLER GUARD	1
14	AX846/106/1	MAIN DRIVE GUARD	1
15	AX846/93	TUNNEL INSPECTION GUARD	1
16	AX846/102	TUNNEL TOP PLATE FIRST SECTION	1
17	AX846/103	TUNNEL TOP PLATE SECOND SECTION	1
18	AX846/104	TUNNEL TOP PLATE FINAL SECTION	1
19	AX846/95	VALVE GUARD	1
20	AX846/86	DIRT CONVEYOR ROLLER GUARD – 1	1
21	AX846/88	DIRT CONVEYOR ROLLER GUARD – 2	1
22			
23	AX846/18	IMPACTOR BULK HEAD GUARD	1
24	AX846-132-601	TOOL BOX (SEE PREVIOUS PAGE ITEM 36)	1
25	AX846/100/1	TUNNEL SECOND SECTION-NON DRIVE SIDE	1
26	AX846/114/1	DIRT CONVEYOR TAIL DRUM GUARD	1
27	AX846/91/1	DIRT CONVEYOR REAR GUARD	1
28	AX846/101/3	CLAMP STRIP	2
29	AX846/99/2	COVER	1
30	AX846/99/3	CLAMP	5
31	AX846/98/3	BRACKET 1	2
32	AX846/98/4	BRACKET 2	2
33	AX846/98/5	CLAMP	4
34	AX846/98/6	BRACKET 3	2
35	AX846/98/7	BRACKET 4	2
36	AX846/98/8	WASHER	12
37	AX846/105/2	BRACKET	2
38	AX846/106/2	COVER PLATE	1
39	AX846/106/3	REAR BRACKET	1
40	AX846/106/4	FRONT BRACKET	1
41	AX846/106/5	GRILL	1
42	AX843/63	HAND RAIL	1
43	AX846/100/2	COVER	1
44	AX846/100/3	CLAMP	5
45	AX846/114/2	CLAMP	1
46	AX846/91/2	CLAMP	1
47			
48	AX815-228-601	CONTROL BOX (SEE PREVIOUS PAGE ITEM 12)	1

AX846/108 iss 02 – 01/12/04

NB. Fixings are not included with the above parts unless specifically ordered



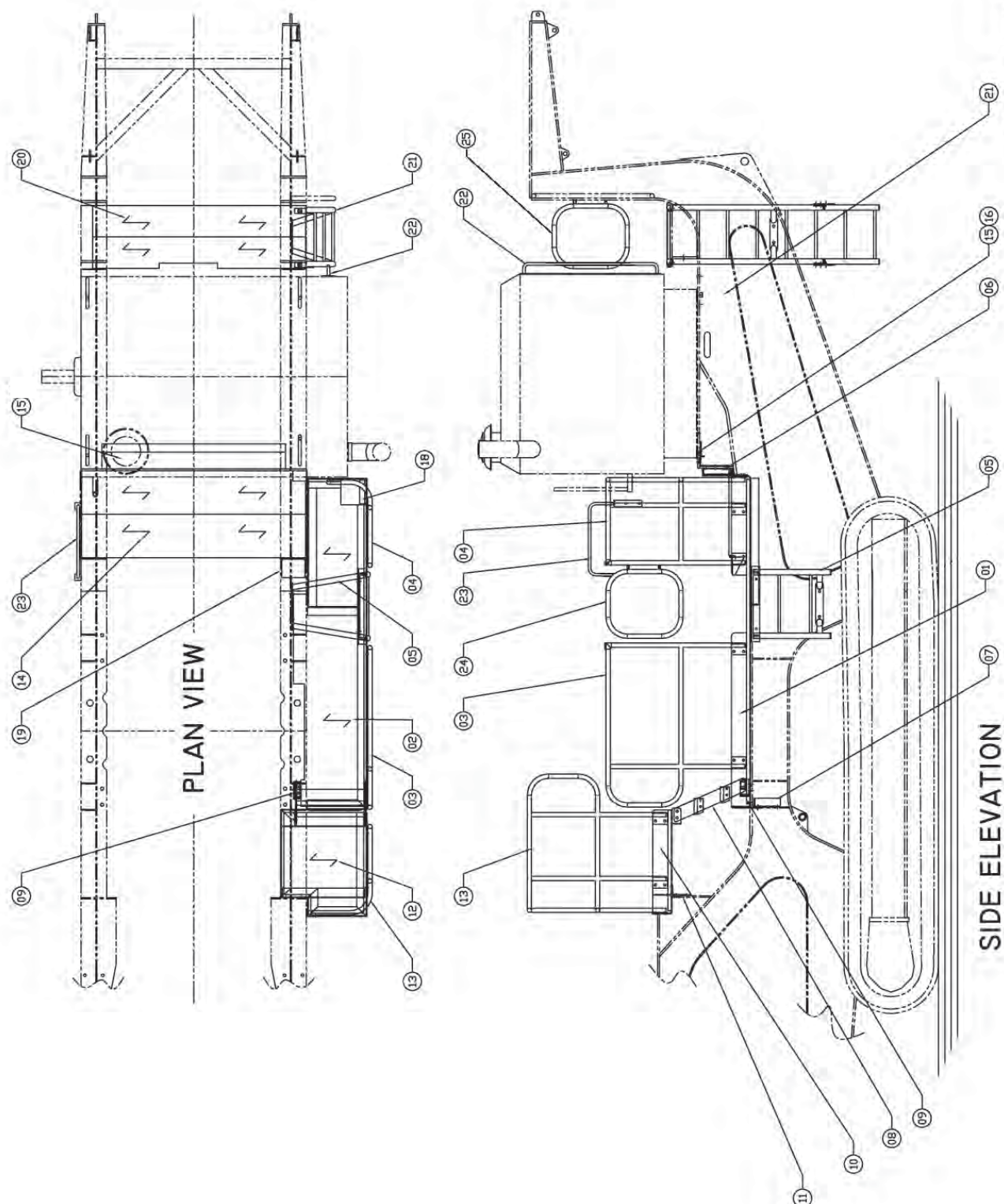
Plant Guards Assembly - 428 Trakpactor

Plant Platforms Assembly

REF	PART NUMBER	DESCRIPTION	QUANTITY
1	AX843/23	LOWER PLATFORM	1
2	AX843/33	LOWER PLATFORM OPEN MESH	1
3	AX843/35	LOWER PLATFORM HANDRAIL 1	1
4	AX843/36	LOWER PLATFORM HANDRAIL 2	1
5	AX843/42	LOWER PLATFORM ACCESS LADDER	1
6	AX843/25	LOWERPLATFORM SUPPORT 1	1
7	AX843/27	LOWERPLATFORM SUPPORT 2	1
8	AX843/29	STAIRS	1
9	AX843/32	STAIR SUPPORT	1
10	AX843/28/1	UPPER PLATFORM	1
11	AX843/28/2	UPPER PLATFORM SPACER	1
12	AX843/34	UPPER PLATFORM OPEN MESH	1
13	AX843/37	UPPER PLATFORM HANDRAIL	1
14	AX843/49	CRUSHER PLATFORM OPEN MESH	1
15	AX843/53/1	CRUSHER PLATFORM FILL IN - FIXED	1
16			
17			
18	AX846/48	VALVE LEVER GUARD	1
19	AX846/18	HOSE COVER	1
20	AX846/130	ENGINE PLATFORM OPEN MESH (2 OFF PANELS)	1
21	AX843/41/1	ENGINE PLATFORM LADDER - UPPER	1
	AX843/41/2	ENGINE PLATFORM LADDER - LOWER	1
22	AX818/180	ENGINE HANDRAIL	1
23	AX843/63	CRUSHER PLATFORM HANDRAIL - DRIVE GUARD	1
24	AX846/115	PLATFORM SAFETY GATE	1
25	AX846/116	PLATFORM SAFETY GATE	1

AX843/27mod – 01/12/04

NB. Fixings are not included with the above parts unless specifically ordered



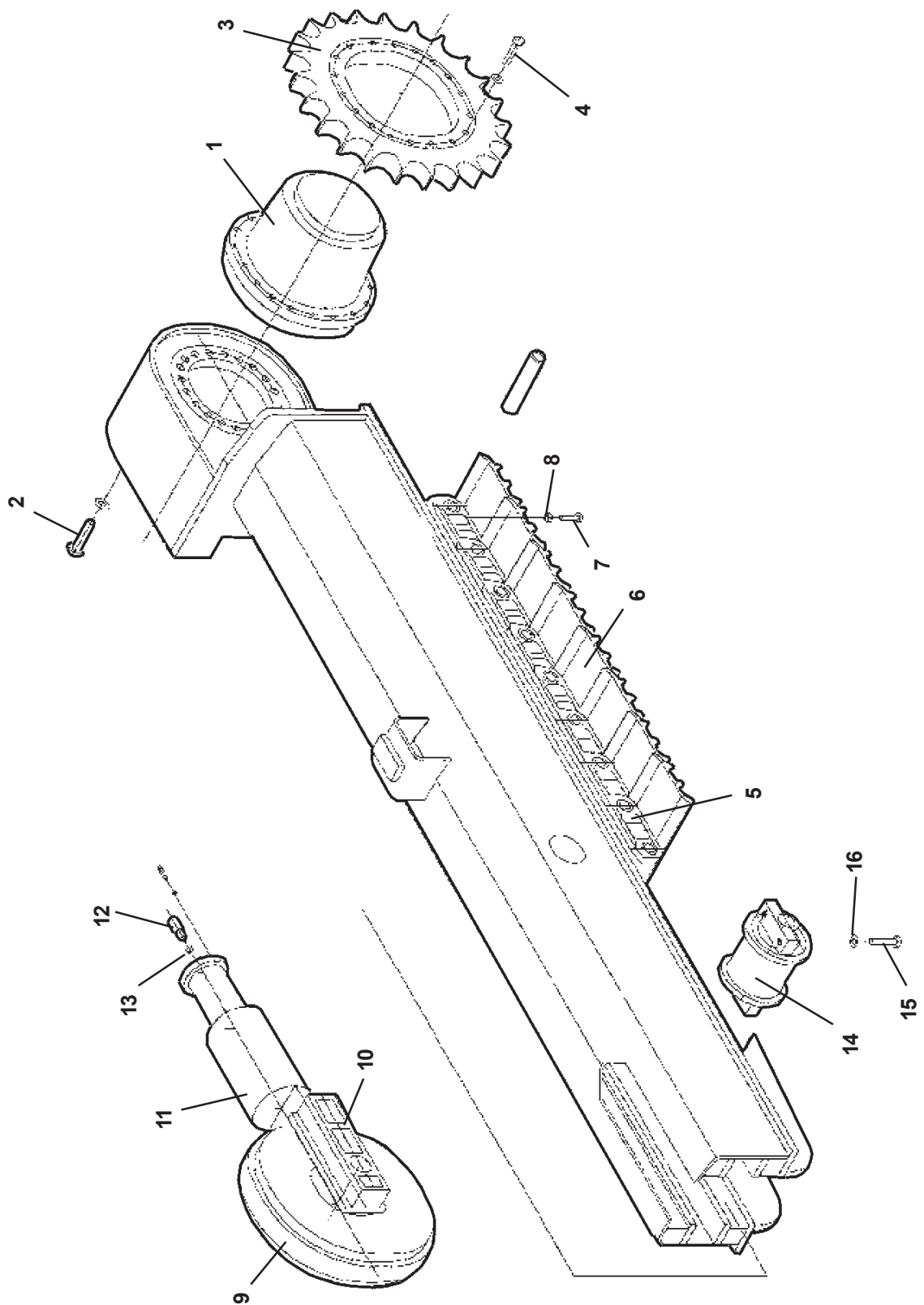
AX846/27 iss. 02MOD

Plant Platforms Assembly - 428 Trakpactor

10.6 Plant Tracks

REF	PART NUMBER	DESCRIPTION	QUANTITY
		CRAWLER TRACK AX846TRAK/A/1	
1	2372-0132	TRACK DRIVE GEARBOX c/w HYDRAULIC MOTOR	2
	2372-0088	GEARBOX DRAIN PLUG	4
2	2372-	GEARBOX CAPSCREWS	52
3	2372-	DRIVE SPROCKET	2
4	2372-	SPROCKET BOLTS	40
5	2372-0006	TRACK CHAIN –COMPLETE	2
6	2372-0007	TRACK SHOE – 400MM WIDE	98
	2372-0104	TRACK SHOE – 500MM WIDE	98
7	2372-0008	TRACK SHOE BOLT	392
8	2372-0009	TRACK SHOE NUTS	392
9	2372-0012	IDLER	2
10	2372-0013	YOKE	2
11	2372-0014	RECOIL UNIT	2
	2372-0103	TENSIONER SEAL KIT	2
12	AX818TRAKS02	GREASER	2
13	AX818TRAKS03	GASKET	2
	AX818TRAKS01	ADAPTOR	1
14	2372-0017	ROLLER	16
15	2372-0018	ROLLER BOLT	64
16	2372-0019	ROLLER BOLT WASHER	64
	2372-0010	REPAIR LINK - TRACK CHAIN	
	2372-0011	MASTER PIN - TRACK CHAIN	

428-S-01/12/04



Plant Tracks Assembly - 428 Trakpactor

10.7 Hydraulic System

Hydraulic Hoses



DESCRIPTION X 1 OFF EACH			
HOSE REF	HOSE	FITTING	LENGTH
1	R1AT-24	1.1/2ST / 2" 3000 90 FLANGE	1660
2	R1AT-24	1.1/2ST / 2" 3000 90 FLANGE	600
3	R1AT-32	1.1/2ST / 2.1/2"Series 3000 90 Flange	470
4	R9R-12	ST / 90S	360
5	R9R-12	ST / 1" 3000 ST FLANGE	970
6	R9R-12	90S / 1" 3000 ST FLANGE	830
7	R2AT-04	1/4BSP ST / 7/16JIC ST	1270
8	R9R-12	36/25/12 MALE / 3/4 90S	865
9	R9R-12	36/25/12 FEMALE / 3/4 90S	1680
10	R2AT-12	36/25/12 MALE / 3/4 90S	850
11	R2AT-06	ST / 90S	630
12	R2AT-12	36/25/12 MALE / 3/4 90ST	3800
13	R9R-12	36/25/12 MALE / 3/4 45DEG	1480-ARM
14	R9R-12	36/25/12 MALE / 3/4 45DEG	1480-ARM
15	R2AT-06	ST / 90S	1800
16	R2AT-06	ST / 90S	1700
17	R2AT-04	3/8STF / 7/16JIC 90S	1800
18	R9R-12	ST / 45DEG	2480-ARM
19	R9R-12	ST / 45DEG	2480-ARM
20	R9R-12	36/25/12 MALE / 3/4 90S	2360
21	R9R-12	36/25/12 MALE / 3/4 90S	2410
22	R2AT-08	7/8JIC ST / 7/8JIC 90S	2120
23	R2AT-08	1/2 ST / 7/8JIC ST	5100
24-29			
30	R2AT-06	ST / 90S	3600
31	R2AT-06	ST / 90S	1900
32			
33	R2AT-12	ST / 90S	4100
34	R2AT-12	ST / 90S	6610
35	R2AT-12	ST / ST	2090

AX846HOSEC9/1 – 01/12/04

Hydraulic Hoses, continued

DESCRIPTION X 1 OFF EACH			
HOSE REF	HOSE	FITTING	LENGTH
36	R2AT-08	ST / ST	4000
37	R2AT-08	ST / ST	4000
38	R2AT-12	ST / ST	900
39	R2AT-12	ST / ST	820
40	R2AT-06	ST / ST	930
41	R2AT-06	ST / ST	700
42	R2AT-06	ST / 45	700
43	R2AT-06	ST / 45	900
44	R2AT-12	ST / 90S	1050
45	R2AT-12	ST / 90S	1070
46	R2AT-12	ST / 90S	3000
47	R2AT-06	ST / 90S	6540
48	R2AT-06	ST / ST	700
49	R2AT-12	ST / 90S	3000
50	R2AT-08	ST / ST	2600
51	R2AT-06	ST / 45	1850
52	R2AT-06	ST / 45	1850
53	R2AT-06	ST / 45	1490
54	R2AT-06	ST / 45	1490
55	R2AT-12	ST / ST	1000
56	R2AT-12	ST / 90S	2000
57	R2AT-12	ST / ST	1050
58	R2AT-04	90DEG /45DEG	580
59	R2AT-04	90DEG /45DEG	810

AX846HOSEC9/1 – 01/12/04

Hydraulic Hoses for Impact Crusher Door Rams



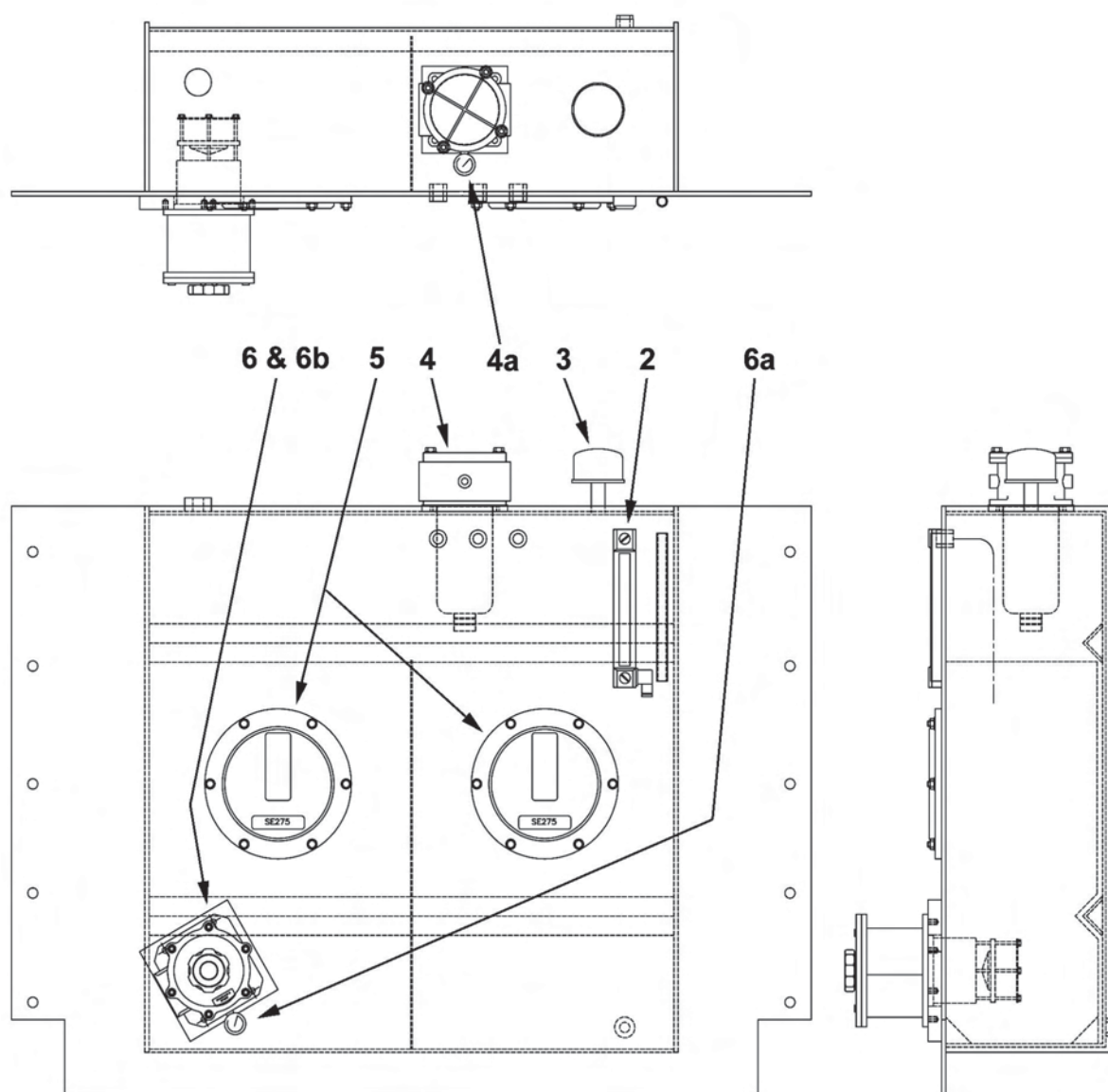
DESCRIPTION X 1 OFF EACH			
HOSE REF	HOSE	FITTING	LENGTH
428 IMPACT CRUSHER DOOR RAM HOSES			
1			
2			
3			
4			
5	R2AT-06	ST / ST	1170
6	R2AT-06	ST / ST	1170
7	R2AT-06	ST / ST	1170
8	R2AT-06	ST / ST	1170
9	R2AT-06	ST / ST	4000
10	R2AT-06	ST / ST	4000
11	R2AT-06	ST / ST	6680
12	R2AT-06	ST / 90S	2200
13	R2AT-08	ST / 90S	1660

AX846HYDAUXHC9 – Iss. 00 - 121203

Hydraulic Oil Reservoir Components

REF	PART NUMBER	DESCRIPTION	QUANTITY
1			
2	2589-2105	FLUID LEVEL GAUGE & SWITCH	1
3	2531-1000	BREATHER	1
4	2531-5060	RETURN LINE FILTER	1
	2531-5151	FILTER ELEMENT	1
4a	2538-0053	RETURN LINE FILTER GAUGE	1
5		INSPECTION COVERS	2
6	2531-5154	SUCTION FILTER	1
	2531-5150	FILTER ELEMENT	1
6a	2538-0054	SUCTION FILTER GAUGE	1
6b	2520-8002	FLANGED ADAPTOR	1

L675 iss 01 – 01/12/04



L675 iss 01

Hydraulic Oil Reservoir Components - 428 Trakpactor

Hydraulic System Components - sheet 1

REF	PART NUMBER	DESCRIPTION	QUANTITY
70	2573-6001	HYDRAULIC PUMP – IN ENGINE CANOPY	2
71	2550-9009	VALVE, HYDRAULIC, 2-WAY	1
72	2550-9005	VALVE, HYDRAULIC, 4-WAY	1
73	2531-5057	FILTER ASSY – IN ENGINE CANOPY	2
	2531-5152	ELEMENT, FILTER	2
74	2592-2006	COOLER	1
75	2553-2013	TEST POINT	2
76			
77	2579-0018	CHECK VALVE	2
78	2553-3010	VALVE, COUNTER BALANCE	1
79	2552-0024	FLOW CONTROL	1
80	2650-9001	HYDRAULIC MOTOR – MAG. SEPARATOR	1
81	2576-4075	HYDRAULIC MOTOR – PRODUCT CONV.	1
82	2576-4002	HYDRAULIC MOTOR – FEEDER	1
83	0000-0000	HYDRAULIC MOTOR – TRACKS	2
84	2564-5015	CYLINDER, HYDRAULIC	2
85	AX843/6	HYDRAULIC OIL TANK	1
	2531-5150	ELEMENT, SUCTION FILTER	1
	2531-5151	ELEMENT, RETURN FILTER	1
86	2550-5001	VALVE, DIVERTER DE20-3A-24G	1
87	2552-6555	COUPLING, FLAT FACE FFC-12M	2
88	2552-6556	COUPLING, FLAT FACE FFC- 12F	2
89	2552-6557	COUPLING, FLAT FACE FFC- 38M	1
90	2552-6558	COUPLING, FLAT FACE FFC- 38F	1
91	2520-6559	TEE, T/MB24/FFB8	1
92	2573-9002	PUMP/MOTOR UNIT	1
93	2553-2021	VALVE, HYDRAULIC	1
94	2535-0001	VALVE, CHECK, PO	2
95			
96	2564-5026	CYLINDER, IMPACTOR	2
97	2576-4078	HYDRAULIC MOTOR – DIRT CONVEYOR	1

AX846/45 Iss 02mod – 01/12/04

Hydraulic System Components - sheet 2

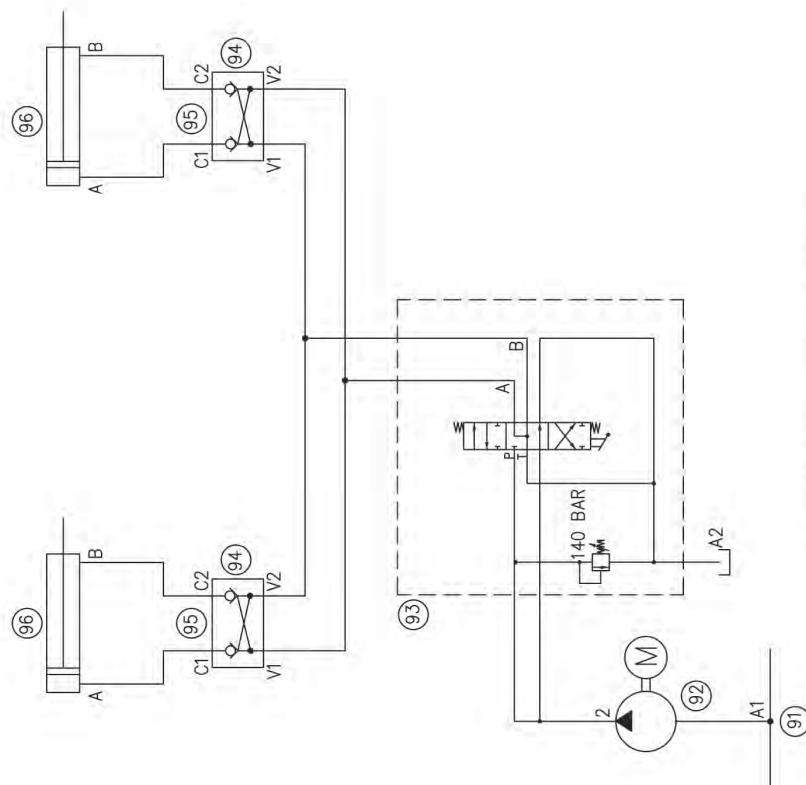
REF	PART NUMBER	DESCRIPTION	QUANTITY
70	2573-6001	HYDRAULIC PUMP – IN ENGINE CANOPY	2
71	2550-9009	VALVE, HYDRAULIC, 2-WAY	1
72	2550-9005	VALVE, HYDRAULIC, 4-WAY	1
73	2531-5057	FILTER ASSY – IN ENGINE CANOPY	2
	2531-5152	ELEMENT, FILTER	2
74	2592-2004	COOLER	1
75	2553-2013	TEST POINT	2
76	2550-9003	MOTION CONTROL BLOCK, OIL CONTROL	2
77	2579-0018	CHECK VALVE	2
78	2553-3010	VALVE, COUNTER BALANCE	1
79	2552-0024	FLOW CONTROL	1
80	2650-9001	HYDRAULIC MOTOR – MAG. SEPARATOR	1
81	2576-4075	HYDRAULIC MOTOR – PRODUCT CONV.	1
82	2576-4002	HYDRAULIC MOTOR – FEEDER	1
83	0000-0000	HYDRAULIC MOTOR – TRACKS	2
84	2564-5015	CYLINDER, HYDRAULIC	2
85	AX843/6	HYDRAULIC OIL TANK	1
	2531-5150	ELEMENT, SUCTION FILTER	1
	2531-5151	ELEMENT, RETURN FILTER	1
86	2550-5001	VALVE, DIVERter DE20-3A-24G	1
87	2552-6555	COUPLING, FLAT FACE FFC-12M	2
88	2552-6556	COUPLING, FLAT FACE FFC- 12F	2
89	2552-6557	COUPLING, FLAT FACE FFC- 38M	1
90	2552-6558	COUPLING, FLAT FACE FFC- 38F	1
91	2520-6559	TEE, T/MB24/FFB8	1
92	2573-9002	PUMP/MOTOR UNIT	1
93	2553-2021	VALVE, HYDRAULIC	1
94	2535-0001	VALVE, CHECK, PO	2
95			
96	2564-5026	CYLINDER, IMPACTOR	2
97	2576-4078	HYDRAULIC MOTOR – DIRT CONVEYOR	1

AX846/45 lss 02mod – 04/12/03

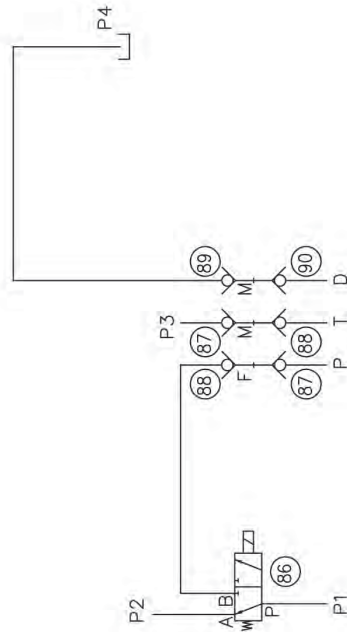
Hydraulic System Components - sheet 3

REF	PART NUMBER	DESCRIPTION	QUANTITY
70	2573-6001	HYDRAULIC PUMP – IN ENGINE CANOPY	2
71	2550-9009	VALVE, HYDRAULIC, 2-WAY	1
72	2550-9005	VALVE, HYDRAULIC, 4-WAY	1
73	2531-5057	FILTER ASSY – IN ENGINE CANOPY	2
	2531-5152	ELEMENT, FILTER	2
74	2592-2004	COOLER	1
75	2553-2013	TEST POINT	2
76	2550-9003	MOTION CONTROL BLOCK, OIL CONTROL	2
77	2579-0018	CHECK VALVE	2
78	2553-3010	VALVE, COUNTER BALANCE	1
79	2552-0024	FLOW CONTROL	1
80	2650-9001	HYDRAULIC MOTOR – MAG. SEPARATOR	1
81	2576-4075	HYDRAULIC MOTOR – PRODUCT CONV.	1
82	2576-4002	HYDRAULIC MOTOR – FEEDER	1
83	0000-0000	HYDRAULIC MOTOR – TRACKS	2
84	2564-5015	CYLINDER, HYDRAULIC	2
85	AX843/6	HYDRAULIC OIL TANK	1
	2531-5150	ELEMENT, SUCTION FILTER	1
	2531-5151	ELEMENT, RETURN FILTER	1
86	2550-5001	VALVE, DIVERTER DE20-3A-24G	1
87	2552-6555	COUPLING, FLAT FACE FFC-12M	2
88	2552-6556	COUPLING, FLAT FACE FFC- 12F	2
89	2552-6557	COUPLING, FLAT FACE FFC- 38M	1
90	2552-6558	COUPLING, FLAT FACE FFC- 38F	1
91	2520-6559	TEE, T/MB24/FFB8	1
92	2573-9002	PUMP/MOTOR UNIT	1
93	2553-2021	VALVE, HYDRAULIC	1
94	2535-0001	VALVE, CHECK, PO	2
95			
96	2564-5026	CYLINDER, IMPACTOR	2
97	2576-4078	HYDRAULIC MOTOR – DIRT CONVEYOR	1

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IMPACTOR DOOR HYDRAULIC CIRCUIT



POWER TAKE OFF HYDRAULIC CIRCUIT

AX846/45 sht 2 iss 02

Hydraulic System Components - 428 Trakpactor

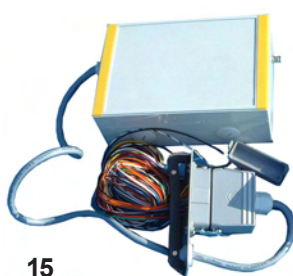
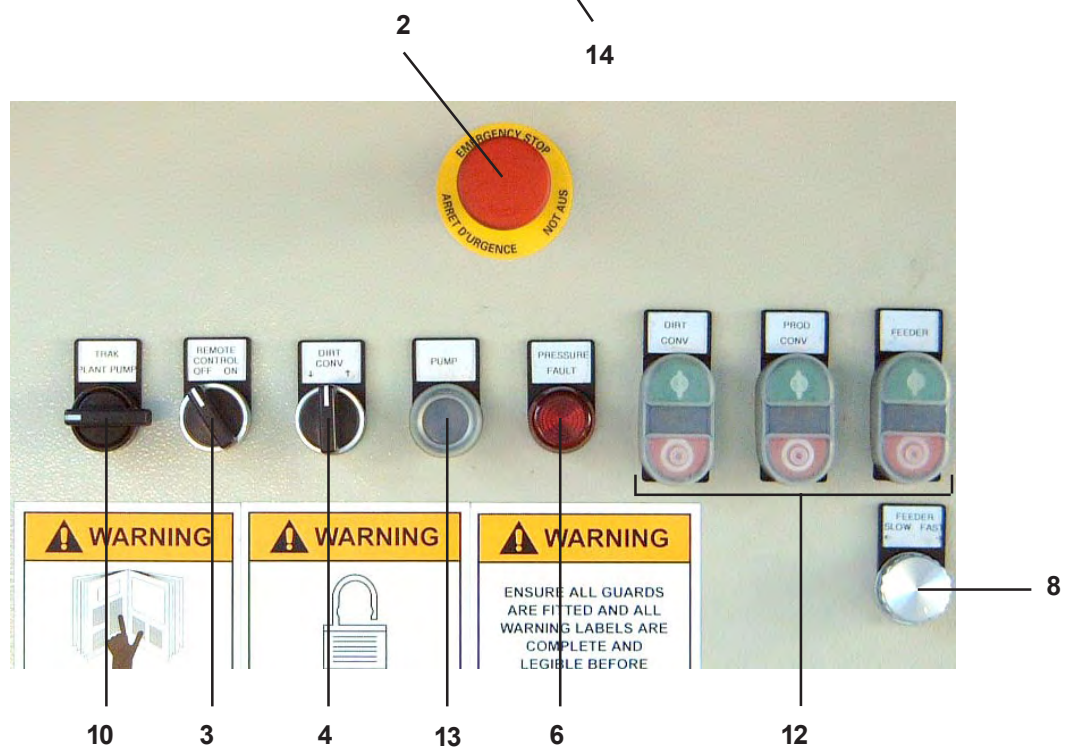
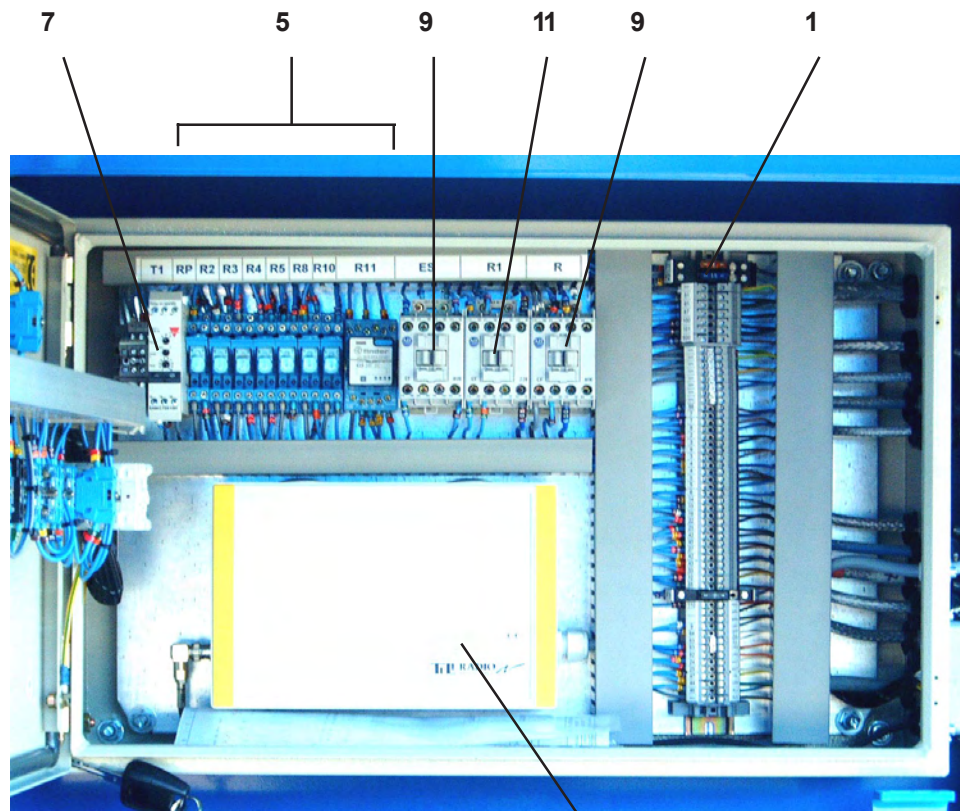
10.8 Electrical System

Electrical Components

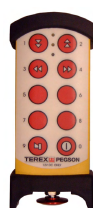
REF	PART NUMBER	DESCRIPTION	QUANTITY
1	2683-2100	FUSE SET COMP 2*3A 2*5A 2*10A 2*16A	1
2	2683-2101	E/M STOP TWIST TO RELEASE PUSH BUTTON WITH CONTACT BLOCKS	2
3	2683-2103	2 POSITION REMOTE CONTROL OFF/ON SWITCH	1
4	2683-2104	3 POSITION SPRING RETURN SWITCH WITH CONTACT BLOCKS	1
5	2683-2106	10 AMP 11 PIN 2 POLE MINI RELAY 24V DC	
	2683-2106A	11 PIN RELAY BASE	
	2683-2107	10 AMP 8 PIN 2 POLE MINI RELAY 24V DC	
	2683-2107A	8 PIN RELAY BASE	
6	2683-2121	INDICATOR LAMP	1
7	2683-2108	15 SECOND PRE-START TIMER 24V DC	1
8	2683-2109	FEEDER SPEED CONTROL POTENTIOMETER	1
	2683-2113	FEEDER SPEED CONTROL KNOB	1
9	2683-2114	HEAVY DUTY E/M STOP RELAY	1
	2683-2114	HEAVY DUTY PANEL SUPPLY RELAY	1
10	2683-2146	3 POSITION STAYPUT SWITCH WITH CONTACT BLOCKS	1
11	2683-2145	ANTI-CRANK RELAY	1
12	2683-2102	STOP/START BUTTON COMPLETE	1
13	2683-2111	BLACK PUSH BUTTON	1
14	2686-0042	TELERADIO CONTROL (WHERE FITTED COMPLETE KIT INCLUSIVE OF ITEMS 15 TO 20 BELOW	1
15	2686-9034	TELERADIO RECEIVER UNIT ONLY (CONTROL PANEL COMPONENT)	1
16	2686-0043	RADIO HAND SET TRANSMITTER – RED STOP BUTTON (USA & REST OF THE WORLD)	1
17	2686-0044	RADIO HAND SET TRANSMITTER – BLACK STOP BUTTON (EUROPE)	1
18	2686-9008	TELERADIO ANTENNA ONLY WITH CABLE	1
19	2686-9007	12/35VDC CHARGER CABLE	1
20	2683-9029	TELERADIO UMBILICAL HAND SET ONLY	1
21	2683-2135	IMPACTOR DOOR LIMIT SWITCH	1
22	2686-0040	REMOTE INFRA-RED HANDSET (WHERE FITTED)	1
23	2685-0001	EMERGENCY STOP STATION ASSEMBLY	1
24	2683-2110	AUDIBLE WARNING UNIT 24V DC	1

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NB. SEE THE HYDRAULIC SYSTEM FOR THE HYDRAULIC VALVE SOLENOIDS.



15



16 & 17



19



20

Electrical Items - 428 Trakpactor

10.9 Safety Signs (with part numbers)

Note: For positions of these Warning Signs refer to Section 1.8, Figures 1b & 1c



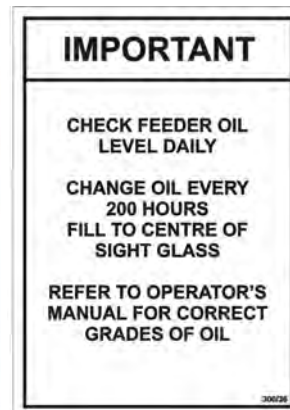
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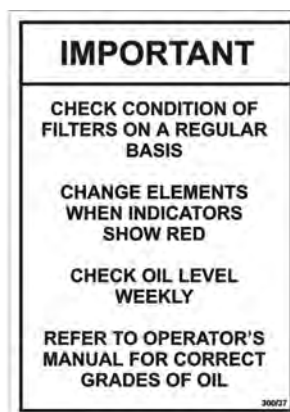
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300/39



300/40



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300/43



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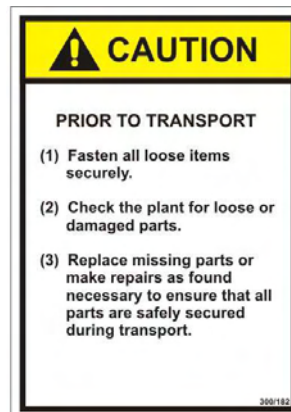
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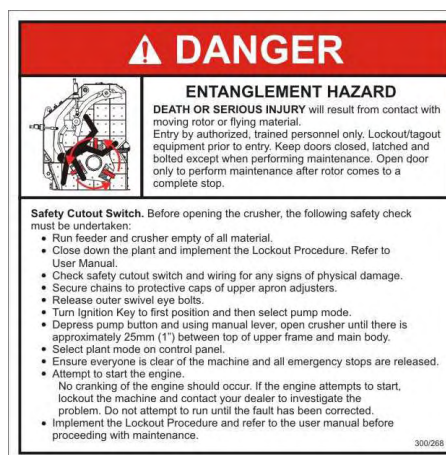
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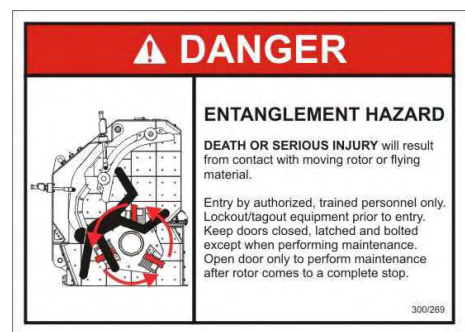
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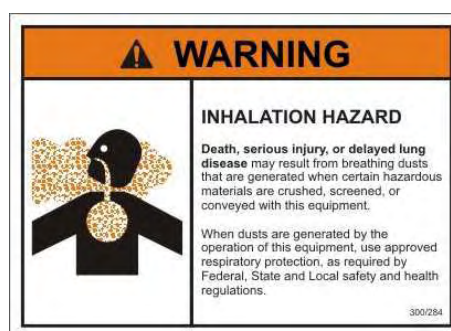
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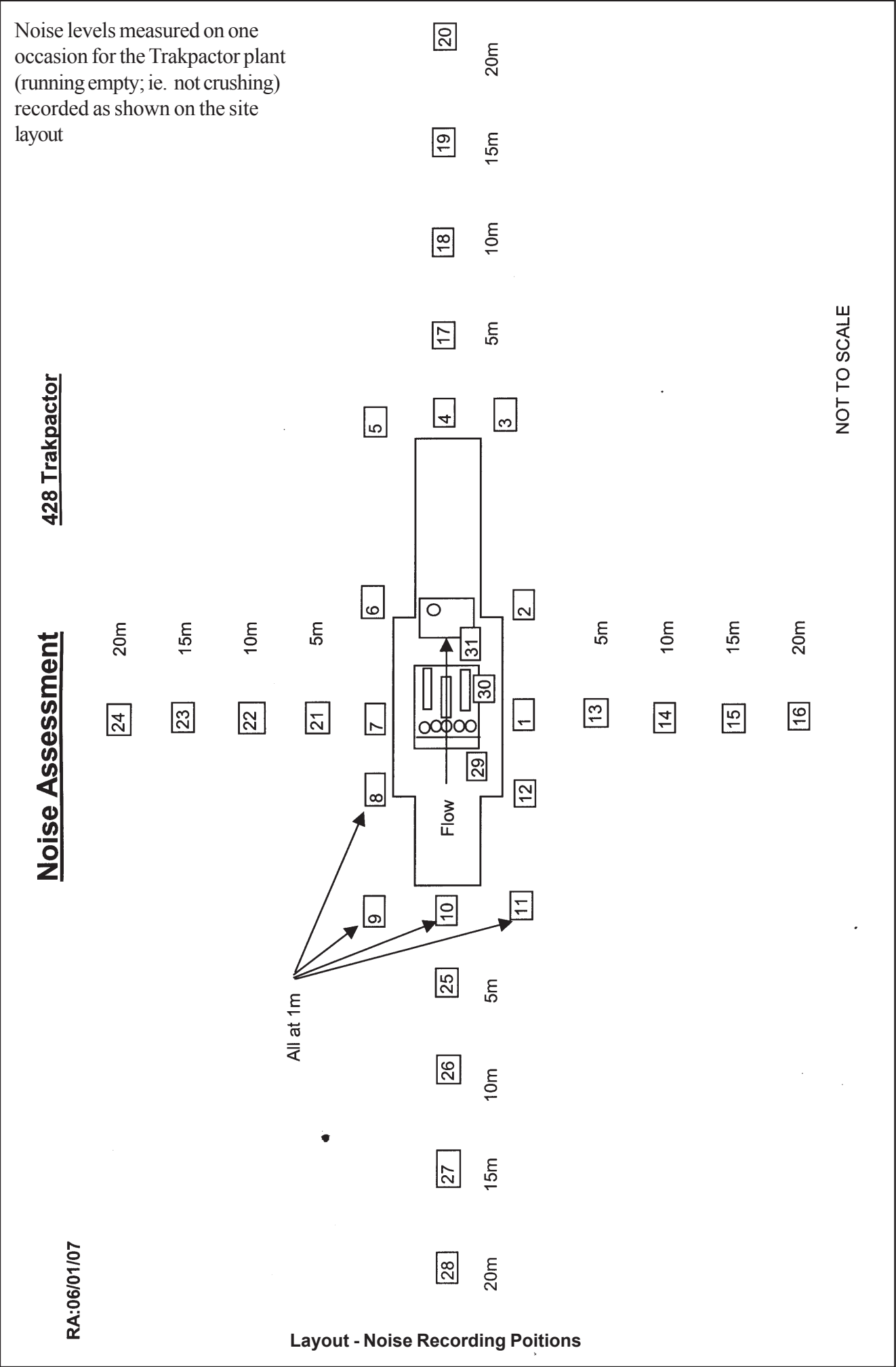
Spare Parts

Trakpactor
428
Issue EN 02
Page 68

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Contents

11.1 Noise Level Assessment	2
11.2 Manual Engine Clutch	4



Noise Assessment

428 Trakpactor

Sound Power Level (SWL)dB
111.4 dB

Sound Pressure Level (SPL)dB(A)
@5metre
89.4 dB(A)

Reading in Decibel (dB(A))

Measurement Point

1	98.0
2	96.6
3	87.9
4	106.8
5	89.1
6	89.3
7	91.0
8	90.0
9	91.8
10	93.7
11	91.5
12	93.0
13	93.5
14	88.7
15	86.5
16	85.7
17	84.3
18	83.3
19	78.2
20	74.0
21	88.0
22	82.9
23	80.9
24	79.1
25	85.6
26	82.5
26	79.1
28	77.2
29	98.6
30	101.8
31	100.2

Measured Noise Levels

Date 13/06/02

Assessor A.John Moore

Signed





11.2 Manual Engine Clutch



Marine & Industrial Transmissions Ltd



Queenborough Shipyard, Queenborough, Kent ME11 5EE
Tel: +44 (0) 1795 580808 Fax: +44 (0) 1795 580900
email: Ukmitgroup@aol.com

POWER TAKE OFF CLUTCH ADJUSTMENTS

All new and replacement power take off units **must** have the clutch adjustment checked before being placed into service. A newly fitted power take off's must have its clutch adjustment checked at the following intervals:

- 1) After installation
- 2) After 4 hours operation
- 3) After 10 hours operation
- 4) At the end of each working day for approx 1 week.
- 5) Once a week

New clutch plates have a 'wear in' period and the clutch may require **several** adjustments until the new plates are 'worn in'

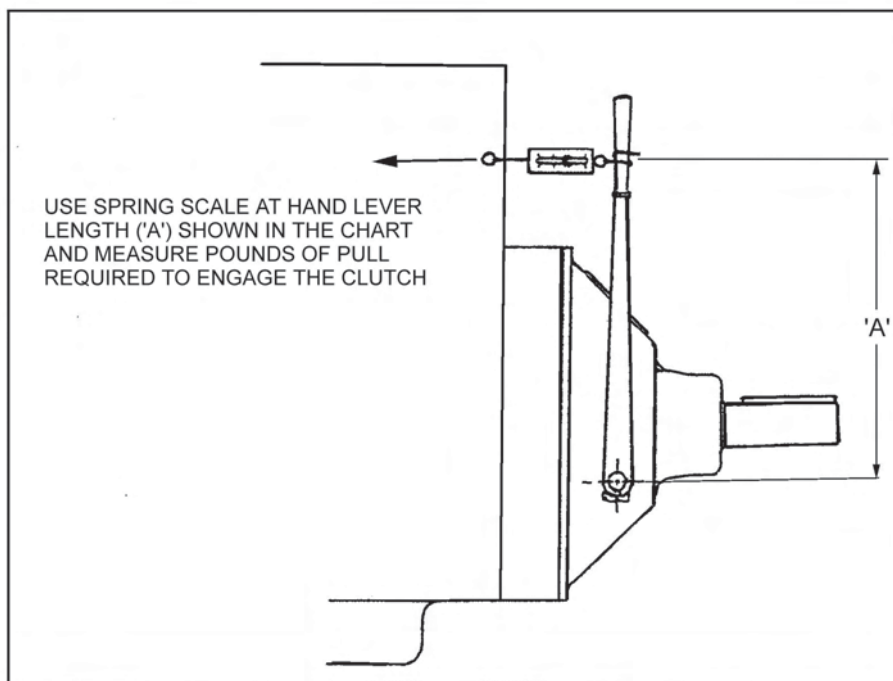
After wear in, clutch adjustments should be made on a weekly basis. Heavy duty applications (rock crushers etc) which have frequent engagements and relatively long periods of clutch slip **will** require more frequent re adjustments than light duty applications.

In order to determine if clutch adjustment is required, operating shaft torque should be measured as shown over.

If this force is found to be at or below the 'MINIMUM' shown, the clutch should be adjusted until the 'MAXIMUM' force for your model is required to engage the clutch.

NOTE: Do not adjust the clutch to tight. Forces above 'MAXIMUM' can cause clutch component failure.

See over for torque ratings



The chart shows the "MINIMUM" and "MAXIMUM" values for clutch adjustment checking.

CLUTCH MODEL	OPERATING SHAFT TORQUE (POUNDS/FEET)		HAND LEVER EFFORT (POUNDS)		HAND LEVER LENGTH (A) (INCHES)
	MIN	MAX	MIN	MAX	
C-106	66	86	58	76	13.6
C-107	66	86	58	76	13.6
C-108	71	94	63	83	13.6
C-110	88	117	78	103	13.6
SP-111	108	142	95	125	13.6
SP-311	171	227		130	21.3
SP-211	134	177	118	156	13.6
SP-114	218	289	123	163	21.3
SP-214	218	289	123	163	21.3
SP-314	218	289	123	163	21.3
IBF-214	240	320	135	180	21.3
IBF-314	240	320	135	180	21.3
*B-118	247	325	139	183	21.3
*B-218	247	325	139	183	21.3
SP-218	514	676	226	297	27.3
SP-318	514	676	226	297	27.3
IBF-318	569	751	172	227	39.7
*EH-121	695	913	210	276	39.7
*EH-221	695	913	210	276	39.7
SP-321	513	675	155	204	39.7
IBF-321	513	675	155	204	39.7
*EH-224	731	966	221	292	39.7

* — These clutch models no longer in production.

This information applies to power take-offs reduction gears and pump drive units built by Twin Disc, Incorporated.



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PEGSON

Appendix

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Page 8

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Addendum to User Manual

Due to the change of engines to comply with requirements of Tier 3/Stage IIIa standards, this plant may have a different engine fitted

**Caterpillar C13 engines are replacing the C12
Caterpillar C9 engines have been revised to comply with the standards
Caterpillar C6.6 engines are replacing the 3126B engines**

Change of Engine Type

The change of engines has resulted in the following changes to engine controls and information in the user manual.

Power Output

The engine power may have changed slightly.

The power of the engine as stated in the manual will not necessarily be correct but the power stated on the plate fixed to the plant is correct.

Engine Speed

The engine working speed may have changed slightly.

The engine speed stated in the manual will not necessarily be correct but the speed set by the engine controls and display is correct.

The engine working speed with no load and speed at full load are now the same.

Engine Monitoring System

The engine monitoring system and engine control panel shown and referred to in the user manual will not be correct.

The engine information will be displayed on a different type of screen.

To operate the engine monitor screen, refer to the appropriate addendum for the controls fitted.

Engine Controls

Some engine controls and warning lamps are not as shown and referred to in the manual as they have been repositioned with other plant controls.

Power Plant Spares

Some engine electrical controls and power pack spare parts will be different to those referred to in the user manual, therefore please contact Terex Pegson and quote plant and engine serial numbers for assistance.

Addendum to User Manual

Caterpillar Messenger Display



INTRODUCTION

The engine fitted on this plant may not have the engine monitoring system shown and referred to in the Terex Pegson User Manual but has the Caterpillar Messenger system.

Messenger is an electronic monitoring system with real-time visual display of engine operating conditions, historical data and diagnostic information.

If applicable, also refer to 'Messenger Display' in Features and Controls in the Operation Section of the Caterpillar Operation and Maintenance Manual for the engine.

Caterpillar Messenger Engine Monitoring System

Operation

The operator button functions are:

1



1. Previous button

Return to previous level and screen display

2



2. Scroll Up / Left button

Scroll display to view different menus and use to set up display settings.

3



3. Scroll Down / Right button

Scroll display to view different menus and use to set up display settings.

4



4. OK button

Confirm selection on the display / continue to next screen

Performance Display

The displays available are:

Engine speed

Coolant temperature

Totals Display

Cumulative totals displays available are:

Service hours engine has accumulated

Total time system in use

Settings Display

System options available are:

- Language used on display screen
- Units shown on display
- Adjust screen contrast
- Adjust screen back light

Identification numbers available are:

- Equipment identification number
- Product identification number

Service Display

Service events display is:

- View logged events, errors or alarms

System parameters are:

- Battery voltage
- Engine speed
- Coolant temperature
- Boost pressure

Self Test

Perform a self test, similar to when the start switch is turned to the ON position

Monitoring information displays are:

- Software part number
- ECM (Electrical Control Module) part number
- Software release date
- Software description

Caterpillar Messenger Engine Monitoring System

Engine information displays are:

ECM serial number
Software part number
Software release date
Software description
Engine serial number

Tattle tale

(To display maximum values reached during operation).

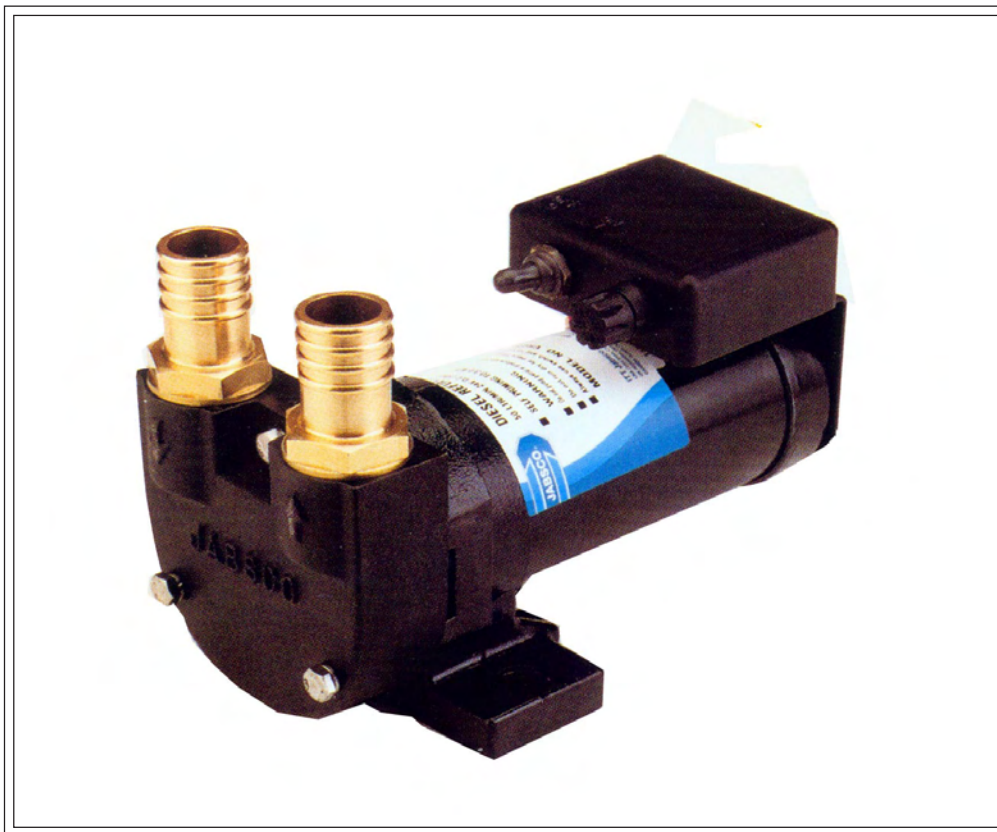
Full tattle tale read-out
Engine coolant
Tachometer

Spare Parts

Some engine electrical controls and power pack spare parts will be different to those referred to in the user manual, therefore please contact Terex Pegson and quote plant and engine serial numbers for assistance.

OPERATING INSTRUCTIONS

FUEL TRANSFER PUMP (for plant diesel engine)



**THIS ADDENDUM IS TO BE INSERTED INTO THE
BL-PEGSON PLANT USER MANUAL - SECTION 11**

Optional Fuel Transfer Pump




This option is available as originally fitted equipment installed at the time of plant manufacture.

The pump is for the purpose of transferring diesel engine fuel from a barrel positioned at ground level alongside the plant diesel engine to the engine fuel tank.

The pump is permanently mounted in a suitable position on the plant in the vicinity of the engine and is electrically driven from a 24 volt DC supply. The unit is fitted with an integral on/off switch.

Also supplied as part of the kit are lengths of plain hose 25mm bore for suction (with strainer) and delivery.

The VR050 Series pump is rated at 50 litres per minute, suitable for equipment with tanks between 200 and 500 litres. Duty is continuous up to + 40° C ambient. Self priming up to 3 metres dry. Flow 50 ltrs/min at 3 metres head. Maximum head 10 metres.

	<h2>WARNING</h2>
	<p>WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1 of the Plant User Manual-Safety Information for relevant warning.</p>
	<p>LOCKOUT MACHINE. Refer to Section 9.1 of the Plant User Manual-Safety Information for Lockout Procedure.</p>

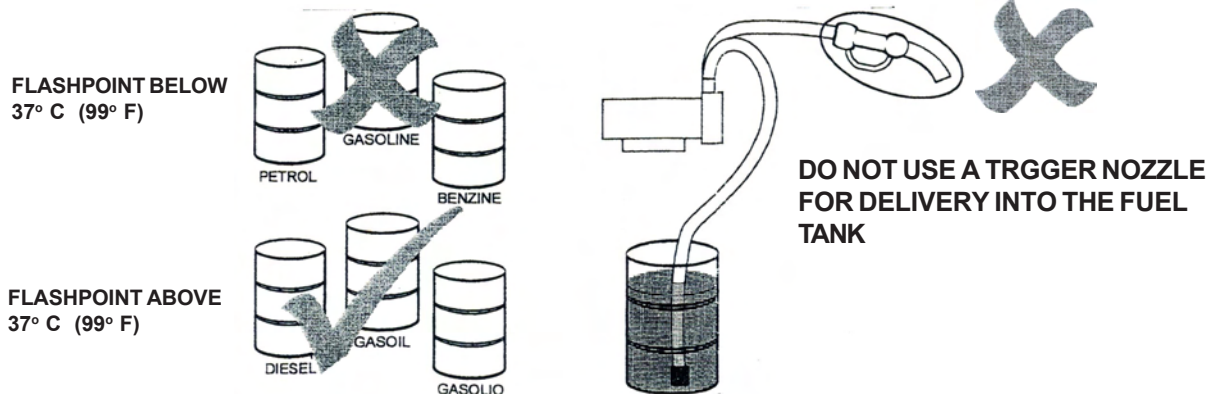


Do not use the fuel transfer pump for any other purpose that filling the diesel engine fuel tank on the BL-Pegson plant.

Observe the Operating, Service & Safety Instructions on the opposite page and also the general Safety Information given in Section 9.1 of the Plant User Manual.

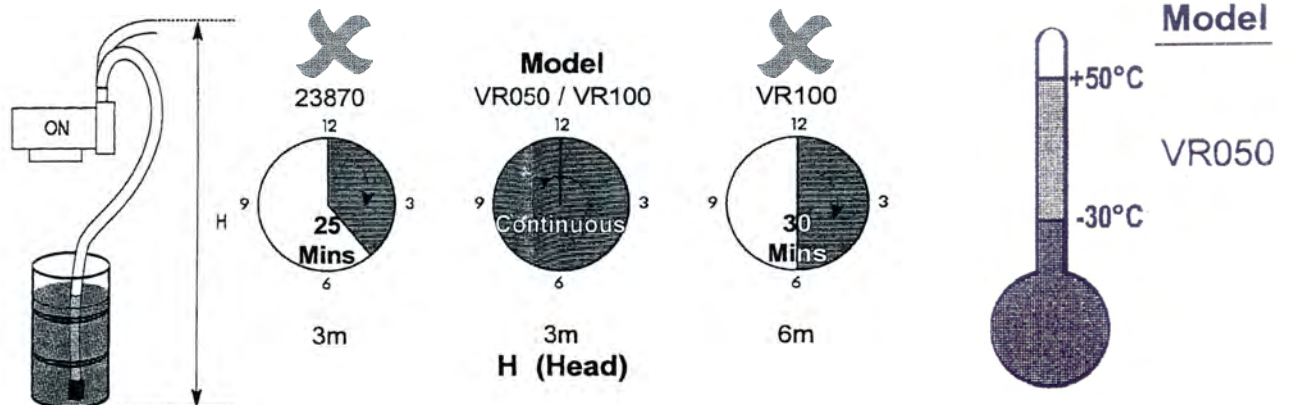
Fuel Transfer Pump Operating, Service & Safety Instructions

SAFETY

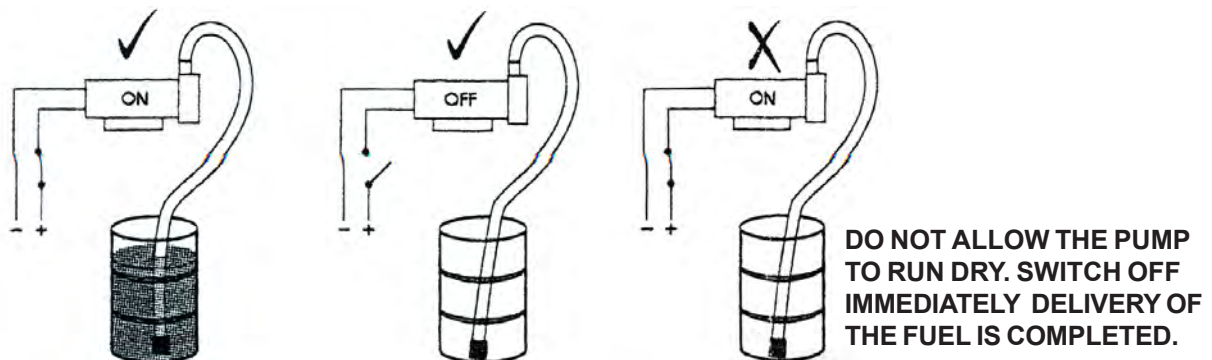


MAXIMUM DUTY TIME AT 40° C

TEMPERATURE RANGE



INSTALLATION & USE



Top Up Fuel Level



**Do Not fill the tank to capacity.
Monitor the gauge located on
the Engine Control Panel.**




**Allow room for expansion and
wipe up spilt fuel immediately,
otherwise paintwork will be
damaged.**

Procedure

1. Observe all safety warnings.
2. Close down the plant (Section 8.2 of the Plant User Manual) and implement the lockout procedure except the engine isolation switch to be at position 'I'.
3. Connect both hoses to the pump and insert the suction hose into the fuel supply. Clean the area around the filler cap. Remove the cap and insert the delivery hose.
4. Operate the switch on the pump to fill the fuel tank. Use only in accordance with the instructions on the previous page.
5. Switch off the pump and stow the hoses. Replace the cap and refit the engine access panel before start up. Turn the engine isolation switch to 'O'.



**Diesel fuel is highly flammable
and is an explosion/burns
hazard.
Never remove the filler cap or
refuel, with the engine running.**

 <h2>WARNING</h2>	
	WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1 of the Plant User Manual-Safety Information for relevant warning.
	LOCKOUT MACHINE. Refer to Section 9.1 of the Plant User Manual-Safety Information for Lockout Procedure.



**Never add gasoline or any
other fuel mixes to diesel
because of increased fire or
explosion risks.**

**Do Not smoke while refilling
or carrying out maintenance on
the fuel system.**

**Do Not carry out maintenance
on the fuel system near naked
lights or sources of sparks,
such as welding equipment.**



Filler Cap

OPERATING INSTRUCTIONS

WATER PUMP

2575-2002 or 2575-2009

(for dust suppression spraybars)



**THIS ADDENDUM IS TO BE INSERTED INTO THE
BL-PEGSON PLANT USER MANUAL - SECTION 11**

Optional Water Pump

This option is available as originally fitted equipment installed at the time of plant manufacture. Two models are available:

- 25 litres/minute nominal (6.6 US galls) to supply the plant spraybars only.
- 65 litres/minute nominal (17 US galls) to supply the plant spraybars plus additional capacity for the operator's off plant needs.

The pump is to provide a pressurised supply of clean water to the dust suppression spray nozzles included on plants as a standard fitment. For details of typical clean water requirements for the dust suppression system, refer to the Maintenance Section 9 of the plant manual.

The pump is permanently mounted in a suitable position on the plant near to the water manifold (Figure 1) and is driven from a branch of the engine driven plant hydraulic system..

The inlet is with hose connector for the user to provide supply suitable piping from the clean water source (eg. bowser near to the plant) as necessary.

Initial on/off control of the pump is by means of a 3 way valve lever (Figure 2) mounted on the pump unit. Whilst this valve lever is in the 'on' position the screw type valve (Figure 2) can be used to regulate the water supply to the plant inlet manifold.

	DANGER
	SKIN INJECTION HAZARD Refer to Section 9.1, of the Plant User Manual, Safety Information for relevant warning
	WARNING
	WEAR PERSONAL PROTECTIVE EQUIPMENT. Refer to Section 9.1, of the Plant User Manual, Safety Information for relevant warning

The supply for external equipment can be taken off one of the drain valves on the spraybar manifold.

No specific maintenance is required for the pump unit except to check for hydraulic oil leaks when carrying out the normal plant maintenance (Section 9 of the plant manual) Frost precautions must be taken in cold weather to ensure water does not freeze within the system, by opening the water manifold drain valves and detaching the pump inlet feed pipe.



**Figure 1 Water Pump Unit
(typical mounting)**

**Flow
Control Valve**

**3 Way
On/Off Valve**



Figure 2 Water Pump Valves

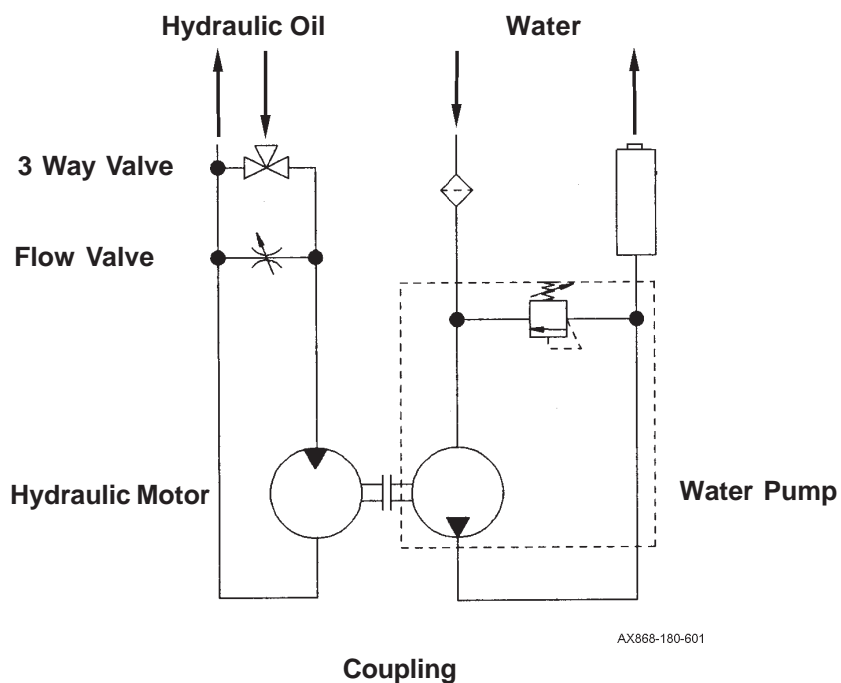


Figure 3 Pump Hydraulic Oil/Water Circuits

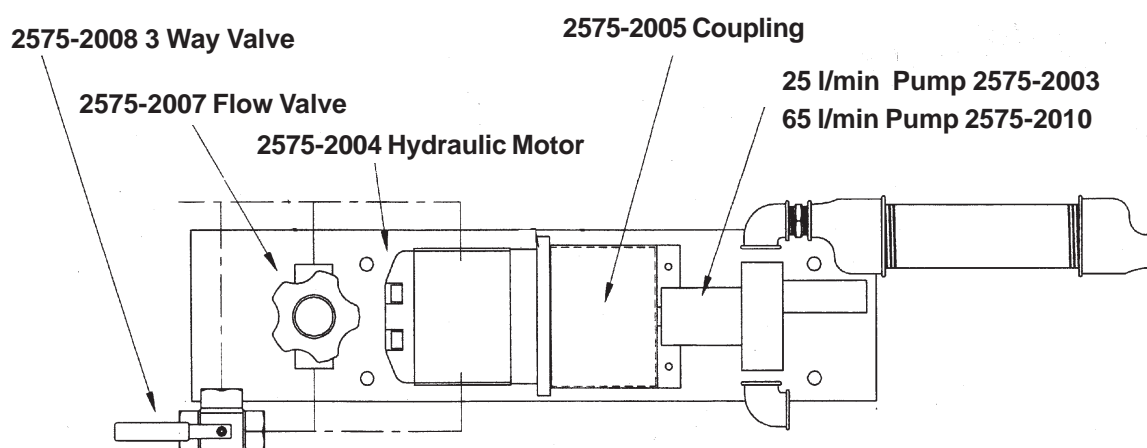


Figure 4 Pump Unit Part Numbers



BW100 INITIAL CALIBRATION SIMPLIFIED GUIDE

The Following procedures may be performed when messages E3 and E4 are displayed during routine calibration.

The E3 and E4 messages indicate a mechanical problem

i.e. Bearing failure on weigh idler and also idlers adjacent to the weigher, new belt fitted, build up on the weigher etc.

Important: The belt should be stopped and secured prior to suspending or removing the test weights for span calibration. Safe working practice should be adopted at all times.

Zero Calibration

With belt running empty at normal speed with test weights removed

	SELECT PARAMETER P377
	INVOKE INITIAL ZERO ENTER " 1 "
	CURRENT ZERO COUNT
	ZERO CALCULATION FREQUENCY COUNT DISPLAYED
	ZERO DEVIATION
	ZERO DEVIATION ACCEPTED INITIAL ZERO COUNT= ####
	PROCEED WITH SPAN CALIBRATION OR RETURN TO RUN MODE

Span Calibration

With belt running empty at normal speed with test weights applied

	SELECT P388
	INVOKE INITIAL SPAN ENTER " 1 "
	CURRENT SPAN COUNT= ####
	SPAN CALCULATION, FREQUENCY COUNT DISPLAYED
	SPAN DEVIATION= ##
	ZERO DEVIATION ACCEPTED INITIAL ZERO COUNT= ####
	RETURN TO RUN MODE



BW100 ROUTINE CALIBRATION SIMPLIFIED GUIDE

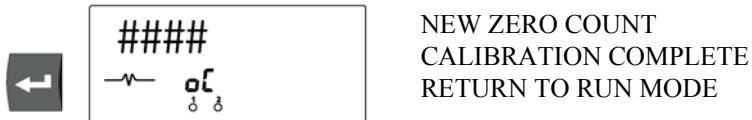
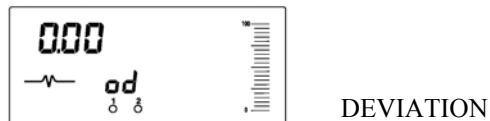
The Following procedures may be performed on a routine basis as required.

Important: The belt should be stopped and secured prior to suspending or removing the test weights for span calibration.

Safe working practice should be adopted at all times.

Zero Calibration

With belt running empty at normal speed with test weights removed



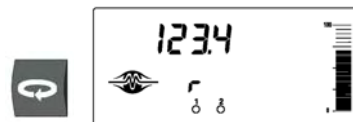
Span Calibration

With belt running empty at normal speed with test weights applied



CALIBRATION COMPLETE REMOVE TEST WEIGHTS

PRESS  TO RETURN TO RUN MODE





MANUAL ADDENDUM

OPERATING INSTRUCTIONS

INFRA-RED REMOTE CONTROL

FOR FEEDER



**THIS MANUAL ADDENDUM IS TO BE INSERTED INTO
THE PLANT OPERATORS MANUAL**

**THESE INSTRUCTIONS REPLACE THE RADIO REMOTE
CONTROL FEEDER INSTRUCTIONS**

INFRA-RED Remote Feeder Operation (where fitted)

This method of remotely stopping and starting the feeder is only supplied with plants not equipped with radio controlled remote feeder control.

The operating range is dependant upon conditions but has a range of up to 30metres (98feet).

Procedure

1. Observe all safety instructions.
2. Take the infra-red control from the control box and first become familiar with the functions of the individual buttons.
3. Turn the Feeder Remote switch on the plant to the 'ON' position. (Section 7 of manual)
4. To operate the feeder remotely the engine must be started, conveyors and feeder must be switched on and the speed of the feeder set. (Section 7 of manual)
5. Point the transmitter lens of the infra-red control unit at the receiver mounted above the engine. Operate the '1' button to start the feeder and the '0' button to stop the feeder.



WARNING



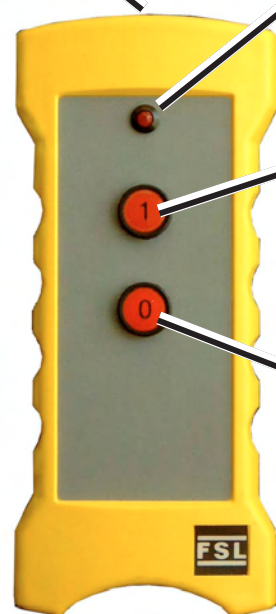
WEAR PERSONAL
PROTECTIVE EQUIPMENT
Refer to Safety
Information in Manual for
relevant warning.

Transmitter Lens

L.E.D.

'1' Start

'0' Stop



Infra-red feeder remote
control operation

General Information

Do not use the transmitter and/or receiver for any other purpose than for which they are supplied or in conjunction with any other equipment.

Ensure that the operating position is in line of sight of the receiver and within range and that the area surrounding the machinery is clear.

Pressing the relevant button will light the red L.E.D. indicator. On releasing the button, the L.E.D. should remain on for 0.5 to 1 second.

Avoid knocking or dropping the infra-red control, keep it clean (especially the lens), dry, and store in a dry place when not in use. Clean both the handset and receiver with a damp cloth only and ensure all screws and connections remain tight.

Infra-red control

Technical Data

Transmitter

Supply Voltage: 1 x 9v Alkaline battery, type 6AM6, 6F22, PP3.

Transmission type: PPM Infra-red. 3 x Lens type transmitters.

Operating temperature: -20°C to 60°C (-4°F to 140°F).

Housing: IP55 Sealed.

Switch type: Tactile sealed.

Receiver

Code: 9 + 10.

Matching transmitters: Any transmitter with codes 9 + 10.

Supply voltage: 12V DC only.

Relay type: K4BC12.

Relay Contacts rating: 16A 240V AC.

Supply current standby: (12V) - <20mA.

Supply Current Active: (12V) - <80mA.

Operating temperature: -10°C to 60°C (14°F to 140°F).

Storage temperature: -20°C to 60°C (-4°F to 140°F).

Relay No1: N/O configuration - Function On/Off.

Relay No2: C/O configuration - Not used.

Troubleshooting

Check that infra-red lenses of the transmitter and/or receiver are clean.


Ensure that transmitter is in range of the receiver and in line of sight.

If the red L.E.D. is not lighting or flashing, change the battery.

If the L.E.D. is working correctly, check the receiver relay operation. There should be a sharp click when the relay operates.

If the relays are working correctly the problem may be in the plant wiring and requiring the services of a qualified electrician.


For a fault where the output ‘chatters’ intermittently, check for electro-mechanical interference from contactors, solenoids, motors, etc. Employ a qualified electrician to solve this type of problem.

TEREX  PEGSON	Notes	Trakpactor 428 Issue EN 02 Page 1
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Hours Run / Date	Notes	Name

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Hours Run / Date	Notes	Name

TEREX  PEGSON	<h1>Notes</h1>	Trakpactor 428 Issue EN 02 Page 3
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